BY ORDER OF THE
SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 23-201

7 JULY 2004

AIR NATIONAL GUARD
Supplement 1

1 MARCH 2005

Supply

FUELS MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally on the AFDPO WWW site at: **http://www.e-publishing.af.mil.**

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Supersedes AFI 23-201, 1 August 1999

Pages: 101
Distribution: F

(ANG)

OPR: ANG/LGSF (SMSgt J. Hall)

Certified by: ANGRC/CV (Lt Col S. Wassermann)

Supersedes AFI23-201_ANGSUP1, 10 May 2002

Pages: 6
Distribution: F

This instruction implements Air Force Policy Directive (AFPD) 23-2, *Supplies and Materiel Management* and Department of Defense Directive (DODD) 4140.25, *DoD Management Policy for Energy Commodities and Related Services*. It provides managers at all Air Force activities with policy and procedures for fuels operations. It applies to all Air Force activities, including US Air Force Reserve and Air National Guard units and contractor operations that receive, store, issue, quality control, and account for aviation fuels, ground fuels, cryogenic fluids, and missile propellants. Certain fuels accounts with a small mission may be exempt from certain provisions of this instruction with major command (MAJCOM) approval. Refer recommended changes and conflicts between this and other publications to HQ USAF/ILGM, 1030 Air Force Pentagon, Room 4A278, Washington, DC 20330-1030, on Air Force (AF) Form 847, **Recommendation for Change of Publication**. If this instruction is in conflict with a technical order, the technical order takes precedence. Any organization may supplement this instruction. HQ USAF/ILGM will review the major command supplement before distribution.

The use of any specific manufacturer name, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

(ANG) AFI 23-201, *Fuels Management*, 7 July 2004 is supplemented as follows. This supplement applies to Air National Guard (ANG) units that receive, store, issue, quality control, and account for aviation fuels, ground fuels, cryogenic fluids, deicing fluids, and missile propellants. When ANG units are

mobilized or federally activated by their respective Major Command (MAJCOM), the gaining MAJCOM supplements apply.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

This is the third publication revision of AFI 23-201. This revision reflects changes as a result of MAJCOM inputs and the change to the Fuels Unit Type Code (UTC) structure. Also incorporated are duties and responsibilities assumed by the Air Force Petroleum Office (AFPET) since their stand-up and the capitalization of aviation and ground fuels by the Defense Energy Support Center. Minor structural changes are also incorporated into **Chapter 8**, Compliance & Environmental.

(ANG) The changes reflect recommendations submitted by the ANG Fuels Policy and Procedures Office, ANG Fuels Management Advisory Group (FMAG), and individual ANG units. All ANG Fuels Management Flights need to review this document. This supplement contains notable changes to spill reporting, FMT designations, alternate receipt mode exercising, and compliance inspection report disposition timelines along with other minor updates.

Chapter 1

THE BASE FUELS MANAGEMENT OFFICE (BFMO)

1.1. Objectives.

1.1. (ANG) Objectives. See **Attachment 4**.

1.1.1. Provide a standard Fuels management organizational structure, see **Attachment 4**. **Note:** MAJCOMs may approve deviations to the structure with prior coordination from HQ USAF/ILGM.

1.1.2. Improve fuels management quality and capability.

1.1.3. Ensure quality bulk petroleum products, cryogenic fluids, and missile propellants are issued safely and efficiently to using organizations.

1.2. Assigning the Responsible Officer. The squadron commander appoints an officer, civilian, or a Senior NCO as the Responsible Officer IAW DoD 4140.25M, *DoD Management of Bulk Petroleum Products, Natural Gas, and Coal*, Chapter 10 and AFI 23-111, *Management of Government Property in Possession of the Air Force* and AFMAN 36-2105, *Officer Classification*. The Senior NCO must have attended the Petroleum Logistics Management Course (PLMC). The requirement to attend PLMC may be waived by MAJCOMs.

1.2. (ANG) Assigning the Responsible Officer. Each unit will maintain the documentation officially designating the Fuels Superintendent as the Responsible Officer. PLMC must be attended within two years of being appointed the Responsible Officer. The appointing office will promptly advise Defense Energy Supply Center-Facilities and Distribution Management Inventory Division (DESC-FI) of the name, rank/grade, and phone number of the Fuels Superintendent appointed as the Responsible Officer.

1.2.1. For contractor-operated bases, Responsible Officers are not assigned. Care and safekeeping of government property is assigned to the contractor by contract IAW DoD 4140.25M, Chapter 10. In addition, the Functional Area Chief (FAC) or Quality Assurance Evaluator (QAE) may perform duties of a responsible officer (RO) provided they have attended the Petroleum Logistics Management Course.

1.2.1.1. Contractors are accountable for maintaining fuels accounting records IAW contract provisions and DoD 4140.25M, Chapter 2, Section D.

1.2.1.2. Contractor personnel responsible for signing/verifying fuels accounting records are required to have completed PLMC.

1.2.1.3. At Government-Owned, Contract-Operated (GOCO)s, the squadron commander/equivalent will appoint in writing an E-6 or above or civilian equivalent to serve as Property Administrator (PA) to exercise those responsibilities identified in DoD 4140.25M, Chapter 2, Section D. Personnel serving as a PA must have completed PLMC.

1.3. Supporting War Plans. Managers must be familiar with AFMAN 10-401, *Operational Plan and Concept Plan Development and Implementation* and AFI 10-404, *Base Support and Expeditionary Site Planning*, when preparing their war plans.

1.4. Submitting Military Construction (MILCON) and Maintenance, Repair and Environmental (MR&E) Projects.

1.4.1. The Fuels Management Team (FMT), consisting of the Fuels Management Flight Commander (FMFC) and the Fuels Manager/Superintendent, validates the operational requirements of each project:

1.4.1.1. Reviews DD Form 1391, **Military Construction Project Data** for POL MILCON projects and reviews MR&E projects prior to Base Civil Engineering (BCE) forwarding to MAJCOM Liquid Fuels Engineers, Programmers and Fuels Management Staffs. Receives informational copy of MAJCOM MR&E projects.

1.4.1.2. Includes complete justification according to DoD 4140.25M, Chapter 8.

1.4.1.3. Appoints a person to monitor and track progress for all MR&E/MILCON projects and coordinate with base Civil Engineering.

1.4.2. MAJCOM Fuels Management will:

1.4.2.1. Validate base-level requirements in accordance with Engineering Technical Letter (ETL) 01-15 and AFI 32-1021, *Planning and Programming of Facility Construction Projects*. Attach coversheet to DD Form 1391 showing MAJCOM concurrence/non-concurrence and retain a copy for audit purposes.

1.4.2.1.1. Ensure the following information is compiled and verified:

- Is the tank size the minimum required?

- Storage capacity must be adequate to support PSO and WRM requirements. Consideration to mission changes must be included in computations and coordinated with the Wing XP function.

- Does the project fulfill the needs of the mission of the base?

- Does the DD Form 1391 clearly state what the mission is, i.e. strategic, enroute, power projection?

- What does the project do for the operation?

- Is there a better alternative?

- Does the project meet eligibility requirements as stated in DoD 4140.25M?

- Does the project fit the definitions for MILCON as stated in DoD 4140.25M?

1.4.2.2. Coordinate with MAJCOM engineers and programmers to prioritize validated projects.

1.4.2.3. Forward a courtesy copy of the coversheet and DD Form 1391 to the Air Force Petroleum Office (AFPET) with a prioritized listing of the projects. The AFPET will consolidate the projects and forward the MILCON package to HQ USAF/ILGM for coordination.

1.4.2.4. MAJCOMs will forward an informational copy of their MR&E priorities to AFPET as part of the annual MR&E data call.

1.4.2.5. The AFPET chairs the Air Force pre-Installation Planning Review Board (IPRB) to prioritize the Air Force projects and submit to HQ DLA/DESC.

1.4.3. The AFPET represents the USAF on the DESC-chaired IPRB, which prioritizes DLA MILCON projects.

1.5. Reporting Fuel-Related Mishaps.

1.5.1. The FMT:

1.5.1.1. Reports mishaps as required by MAJCOM/LGRF and AFI 91-204, *Safety Investigations and Reports*, and AFI 10-206*, Operational Reporting*. Mishaps include contamination incidents, fuel spills, equipment/facility damage, vehicle accidents and personnel injuries.

1.5.1.1.1. **(Added-ANG)** Report fuel spills over 25 gallons, Class III fuel spills involving an area over ten feet in any plane dimension (direction) or over 50 square feet in total area or of a continuing nature, and all mishaps to ANG, Fuels Management Office (ANG/LGSF) by e-mail or message traffic no later than two hours after the event. Use the suggested format in **Attachment 11**.

1.5.1.2. Sends follow-up notification to MAJCOM/LGRF by the end of the first duty day after the mishap.

1.5.1.3. Sends an advisory message or email within 30 days to MAJCOM/LGRF on the outcome of the investigation and lessons learned.

1.5.1.4. Reports fuel spills as required by MAJCOM/LGRF using the suggested or similar format in **Attachment 11**, Fuel Spill Report Format.

1.5.1.5. Reports fuel contamination and quality deficiencies IAW DoD 4140.25M and MIL-STD-3004

1.5.1.6. Submits fuel spill, fuel contamination and quality deficiency reports via standard message, facsimile, or electronic mail.

1.5.1.7. Coordinates with the base environmental manager on follow-up messages for reportable fuels spills.

1.5.2. MAJCOM/LGRF:

1.5.2.1. Notifies applicable Defense Energy Office (DEO)/Defense Energy Region (DER), AFPET and HQ USAF/ILGM of any mishap or fuel spill involving fuels facilities and equipment or if the incident is likely to have adverse environmental consequences or elicit media coverage. Send a courtesy copy to NAF/LGRF and SAPO if applicable.

1.5.2.2. Disseminates lessons learned as cross-flow information within the Command and to other MAJCOMs, when applicable.

1.5.3. AFPET:

1.5.3.1. Notifies DESC of fuels mishaps and fuel spills involving fuels facilities and equipment or if the incident is likely to have adverse environmental consequences or elicit media coverage.

1.5.3.2. Provides historical data on mishaps and spills, providing lessons-learned to the field and recommending policy and procedural changes when appropriate.

1.6. Managing Inspection Discrepancies. The FMT:

1.6.1. Corrects all deficiencies and eliminates their causes.

1.6.2. Reviews all uncorrected vehicle and facility discrepancies monthly.

1.6.3. When all options have been exhausted sends a letter listing the discrepancies and requested action through the squadron commander to the supporting organization commander.

1.7. Controlling Personnel Quality. The FMT:

1.7.1. Interviews personnel within 30 days after they arrive to determine their qualifications, past experience and future training needs to allow best placement within the flight.

1.7.2. Reports any training or qualification discrepancies to the Military Personnel Flight.

1.8. Task Restrictions. The FMT:

1.8.1. Monitors individuals working more than eight continuous hours at fuel/cryogenic handling operations for alertness and situational awareness.

1.8.2. Does not allow untrained or uncertified fuels personnel to perform fuels and cryogenics handling operations without task-qualified supervision.

1.9. Augmenting Personnel.

1.9.1. Only task-qualified personnel with Air Force Specialty Code (AFSC) 2F0X1, US Civil Service or US Contract employees, or host national military/civilian equivalent, sister Service/country equivalent are allowed to conduct fuels or cryogenics handling operations. Non-fuels personnel may augment as the second person for two-person safety coverage after receiving a specific briefing regarding their responsibilities during a mishap.

1.9.2. Personnel identified as Forward Area Refueling Point (FARP) operators will not be utilized for mobility taskings other than FARP requirements.

1.9.3. As a stressed career field, deployable fuels personnel are critical and therefore must not be used to augment other base agencies during contingency operations. Before utilizing fuels personnel to augment other base agencies, the FMT must contact their parent MAJCOM fuels staff. The MAJCOM fuels staff must contact the AEF Center to determine if there are pending deployment taskings that can flow to that unit.

1.10. Managing Fuel Contract Operations. The Property Administrator for the contract (usually the FAC or QAE) working through the contracting office:

1.10.1. Performs a technical review of service contracts to ensure they provide quality fueling support.

1.10.2. Coordinates all base fuels service contracts with MAJCOM Fuels Management and HQ USAF/ILGM.

1.10.3. Ensure the contract specifies:

1.10.3.1. Training and qualification meets AFSC 2F0X1 requirements when applicable.

1.10.3.2. Spot check evaluations and recurring certification are similar to Air Force employees.

1.10.3.3. Performance requirement documents or performance work statements comply with this instruction, AFMAN 23-110, *USAF Supply Manual*, DoD 4140.25M, and AFI 31-601, *Industrial Security*.

1.10.3.4. The contractor will provide an organizational chart to illustrate how communications of all fuel support requirements are funneled to the Resource Control Center.

1.10.3.5. A fully qualified single point of contact for coordinating, controlling, and directing fuel servicing operations to ensure all customer requirements are fulfilled in a timely manner and off-specification or wrong grade of product is not issued to aircraft, equipment, or vehicles.

1.10.3.6. The QAEs will monitor contractor performance IAW Occupational Safety and Health Administration (OSHA) Standards (see **Attachment 1** for a recommended list that is not meant to be all-inclusive). In addition, use Air Force Occupational Safety and Health Standards (AFOSH) determined necessary and more stringent than OSHA standards.

1.10.4. Personnel filling Quality Assurance Evaluator positions must be Air Force Specialty Code (AFSC) 2F071, civilian equivalent or higher.

1.10.5. The QAE will monitor command and control capabilities to ensure fuel quality standards are met and physical controls prevent use of unserviceable equipment or product.

1.10.6. Fuels operations under contractor or Most Efficient Organization (MEO) will not deviate from this instruction. They will follow procedures outlined in this AFI, paragraph **1.20.**, if requesting relief from this instruction.

1.11. Special Tools, Equipment, and Facilities. Items need not be separately possessed by fuels activities if available in close proximity to and available from refueling maintenance to allow joint use by both activities.

1.11.1. Requirements are specified in Allowance Standard (AS) 488. As a minimum the following items should be located in or near the fuels management area:

1.11.1.1. A vehicle wash rack equipped with appropriate environmental controls located within or near the refueling unit parking area.

1.11.1.2. A liquid degreasing machine capable of cleaning engines on mobile fueling equipment (make sure the discharge from the degreaser drains into appropriate environmental controls).

1.11.1.3. A compressed air source.

1.11.1.4. 10 or 20-ton capacity hydraulic jack.

1.11.1.5. Pneumatic impact wrench.

1.11.1.6. Approved static grounding post installed for grounding refueling equipment during product movement.

1.11.1.7. 10 or 20-ton capacity jack stands.

1.11.1.8. A multimeter.

1.11.1.9. A tire dolly.

1.11.2. Facilities.

1.11.2.1. Fuels facilities are described in AFH 32-1084, *Facility Requirements* and MIL-HDBK-1022A, *Petroleum Fuel Facilities* for new facilities.

1.11.2.1. **(ANG)** ANG facilities should conform to ANG Handbook 32-1084, *ANG Facility Requirements*. This handbook supplements AF Handbook 32-1084.

1.12. Using Hydrants. Hydrant systems are efficient and should be used to refuel and defuel large aircraft.

1.12.1. Surveying Hydrant Use. The wing commander:

1.12.1.1. Directs a joint survey/review every two years, in conjunction with refueling unit validation, with members from the Operations Group, Maintenance Group, the Mission Support Group, and Fuels Management to determine the optimum hydrant and mobile refueler use ratio. The survey should include manpower, equipment availability, and sortie rates.

NOTE: A joint survey/review is not required every two years when local procedures for managing hydrant utilization rates are published in a base supplement to this instruction and are reviewed annually.

1.12.1.2. Approves goals for hydrant utilization and implements procedures to document compliance.

1.12.2. Modification/Deactivation. Before modifying or deactivating hydrant systems, send a request to the parent MAJCOM that includes:

1.12.2.1. Capability of existing system.

1.12.2.2. Current and programmed fueling requirements.

1.12.2.3. Maintenance cost savings or avoidance, possible use of tankage, and proposed method of fueling support.

1.12.2.4. Coordinate request through BCE and LFM personnel.

1.13. Managing Organizational Fuel Tanks. Follow the procedures in AFI 23-204, *Organizational Fuel Tanks*.

1.13.1. Sampling and testing of support tanks used for heating purposes (See AFI 23-204, paragraph 8.3) will be scheduled in Fuels Automated System (FAS). A copy of area lab test results will be provided to the Fuels Environmental Coordinator.

1.13.2. Resource Control Center (RCC) will maintain a current list of all organizational fuel tanks and trained tank custodians. Verify grade of fuel and tank custodian prior to fuel delivery from Fuels Management deliveries.

1.14. Vehicle Fuel Servicing. Use the military service station when practical. During contingencies or exercises, service vehicles by mobile fueling units as required.

1.14.1. General Purpose Vehicles. These vehicles will refuel at the base service station unless authorized an organizational issue tank or the FMT approves refueling from mobile units.

1.14.2. Special Purpose Vehicles. Use a mobile refueling unit to service special purpose vehicles and materiel handling equipment (MHE) that cannot easily travel to the base service station due to body design or propulsion method

1.14.3. The FMT will develop procedures for authorizing and validating requests for mobile servicing.

1.15. Using Fuel Servicing Units.

1.15.1. See para **5.14.** for refueling equipment authorizations.

1.15.2. Obtain MAJCOM approval to use aviation fuel vehicles to issue ground products for periods over 90 days.

1.15.3. Obtain MAJCOM approval before fuel servicing units are utilized to assist in environmental clean-up operations. Before returning them to normal service, ensure they meet compliance requirements outlined in T.O. 42B-1-1, *Quality Control of Fuels and Lubricants*.

1.16. Communication with Operators During Fuel Transfers.

1.16.1. Establish and maintain two-way radio, voice, or telephone communication between pumping and receiving stations for all fuel transfers.

1.16.2. Use dedicated circuits (hot lines), extra telephone circuits, or outgoing call restrictions to ensure telephone contact in an emergency. Provide a loud bell, gong, horn, or other signaling device outside and in high noise area.

1.17. Establishing Fuels Operating Instructions (FOI) and Checklists. If FOIs and checklists are required, assign individual identification numbers and review at least annually. Use the following guidelines.

1.17.1. FOIs:

1.17.1.1. Write FOIs to provide local procedures.

1.17.1.2. Do not duplicate information contained in other directives unless necessary to consolidate or emphasize.

1.17.1.3. Designate the fuels operations that require the mandatory use of locally developed checklists.

1.17.2. Checklists:

1.17.2.1. Write checklists in a simple, concise, and comprehensive manner.

1.17.2.2. Keep them one page long, if possible.

1.17.2.3. Include emergency action procedures at the beginning of the checklist.

1.17.2.4. Make them bilingual, if necessary.

1.18. Maintaining Technical Orders (T.O.).

1.18.1. Establish an independent T.O. account with the base technical order distributing office.

1.18.2. Maintain those T.O.s required for individual base support requirements.

1.18.3. Maintain additional T.O.s required for training and deployments.

1.18.3. **(ANG)** Not Applicable to the ANG.

1.18.4. T.O.s maintained for training and deployments will be kept up-to-date at all times and will not be marked as “For Training Use Only”. Use electronic versions of T.O.s for training when available.

1.19. Reporting of Technical Data and Materiel Deficiencies.

1.19.1. Identify any errors, contradictions, procedures requiring clarification, and materiel deficiencies following specific procedures in T.O.s 00-5-1, *AF Technical Order System*, and 00-35D-54, *USAF Deficiency Reporting and Investigating System*.

1.19.2. See T.O. 00-5-1 for specific guidance on preparing AFTO Form 22, **Technical Manual Change Recommendation and Reply.**

1.20. Obtaining Waivers to This Instruction. Send requests for waivers to your MAJCOM. MAJCOMs may waive provisions of this instruction for up to 1 year and send an information copy to HQ USAF/ILGM. Permanent waivers (over one year) are considered deviations and must be approved by HQ USAF/ILGM. Make sure each request does the following:

1.20.1. Explains all the circumstances.

1.20.2. Defines the exact limits of the waiver.

1.20.3. Specifies its duration.

1.20.4. Describes alternate procedure and explain how it will ensure safety.

1.20.5. Show local waiver/deviation request coordination.

1.21. Records Disposition. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFPD 37-1, *Information Management* and AFMAN 37-123, *Management of Records* and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at **https://webrims.amc.af.mil**.

1.21.1. Review the Fuels Management Flight File Plan at least annually for accuracy and completeness. Coordinate changes with responsible Functional Account Records Manager and document review and corrective actions.

Chapter 2

DUTIES OF ORGANIZATIONS INTERACTING WITH FUELS MANAGEMENT

2.1. HQ USAF. The Directorate of Logistics Readiness, Materiel Management and Policy Division (HQ USAF/ILGM):

2.1.1. Establishes US Air Force policy for managing petroleum resources.

2.1.2. Provides staff supervision to effectively implement the management concepts outlined in this instruction.

2.1.3. Develops petroleum budget estimates and accomplishes other financial and commodity management responsibilities.

2.1.4. Provides representation and staff support to the Defense Energy Support Center Core Steering Group.

2.1.5. Manages the Logistics Education Advancement Program (LEAP) and the Fuels Management Professional Enhancement Program (PEP) according to **Attachment 3**.

2.1.6. Assembles the Fuels Management Steering Group (FMSG). The Chief of Materiel Management and Policy Division chairs the FMSG, the primary forum to coordinate fuels policy. The FMSG meets annually prior to the Spring Air Force Materiel Management Board (AFMMB). Only the core members may vote on issues. See **Attachment 15** for a complete list of core and advisory members and charter topics.

2.1.7. Assembles the Fuels Strategic Planning Council (FSPC) (formerly the Fuels Career Field Enhancement Conference.) The Fuels Career Field Manager chairs the FSPC annually the week prior to the Fall AFMMB and Logistics Readiness Competition to develop 2F0X1 career field policy and formulate proposals for presentation to the FMSG. See **Attachment 15** for a complete list of core and advisory members and charter topics.

2.1.7.1. MAJCOMs will solicit agenda items from field units after the conference date has been announced.

2.1.7.2. MAJCOMs submit potential discussion items to HQ USAF/ILGM and AFPET using the format at **Attachment 12**.

2.1.8. Assembles the Air Force Installation Planning Review Board (AFIPRB). Hosted by AFPET annually prior to the DESC IPRB to review and validate MILCON projects, implement Fuels Infrastructure policy and prepare issues for the FMSG. See **Attachment 15** for a complete list of core and advisory members and charter topics.

2.1.9. Assembles the Fuels Utilization & Training Workshop (U&TW). This workshop is held every two years and hosted by AETC to develop and implement fuels training requirements. **Attachment 15** provides a complete list of core and advisory members and the workshop's charter topics.

2.1.10. Assembles the Fuels Information Technology Workgroup (FITW). This group meets annually or as required to prepare issues for the FMSG, develop FAS/FES procedures and establish fuels accounting requirements. **Attachment 15** provides a complete list of members and the workgroup's charter topics.

2.1.11. Assembles the Fuels Support Equipment Workgroup. This group meets annually or more frequently as necessary to prepare issues for the FMSG, review and develop allowance standards and to implement vehicle and equipment safety policy. **Attachment 15** provides a complete list of members and the workgroup's charter topics.

2.2. Air Force Petroleum Office (Det 3 WR-ALC/AF):

2.2.1. Air Force service control point for MILCON and MR&E programs.

2.2.1.1. AF MILCON Responsibilities:

2.2.1.1.1. Coordinates with AF/ILEC for the MILCON data call.

2.2.1.1.2. Establishes the schedule for submission of AF projects to AFPET to ensure the MILCON submission date in the DESC data call is met.

2.2.1.1.3. Ensures DD Form 1391, Military Construction Project Data validations are completed by MAJCOMs for MILCON consideration.

2.2.1.1.4. Prioritizes Air Force MILCON projects. Chairs Pre-Installation Planning Review Board (IPRB) workshop to assist in prioritization.

2.2.1.1.5. Hosts the AF IPRB for final AF prioritization.

2.2.1.1.6. Provides Air Force voting member on the DESC IPRB.

2.2.1.1.7. Provides technical assistance to base/MAJCOM personnel requiring assistance in preparing DD Form 1391s.

2.2.1.1.8. Reviews construction designs to ensure standardization/modernization consistency.

2.2.1.2. AF MR & E Responsibilities:

2.2.1.2.1. Forwards the DESC data call for MR & E projects to all MAJCOM Civil Engineers and Fuels Management Offices for response.

2.2.1.2.2. Establishes the AF schedule for project submissions to the AFPET

2.2.1.2.3. Prioritizes all CONUS AF projects.

2.2.1.2.4. Coordinates all alternate fuel facility issues with MAJCOM, Air Staff, and DESC.

2.2.2. Manages the Air Force fuel vehicle and equipment programs.

2.2.2.1. Consolidate and validate equipment/vehicle requirements and coordinate with item managers on funding/procurement programs.

2.2.2.2. Develop, validate and coordinate equipment and vehicle allowance standards with item managers.

2.2.2.3. Collects and performs analysis on vehicle and equipment mishaps and disseminates information to the MAJCOMs.

2.2.2.4. Reviews, validates, and provides updates on equipment/vehicle Technical Orders.

2.2.2.5. Provides item managers with detailed customer requirements to include technological advances for new buy programs.

2.2.2.6. Evaluates commercial-off-the-shelf equipment capabilities and coordinates requirements with MAJCOMs.

2.2.3. Provides plans and programs management analysis and oversight.

2.2.3.1. Collects, analyzes and publishes base fuel mishap reports and environmental incidents.

2.2.3.2. Provides trend analysis on data effecting or potentially effecting fuel handing operations.

2.2.3.3. Develops and coordinates policy for HQ USAF/ILGM approval

2.2.3.4. Performs research for HQ USAF/ILGM and shares knowledge with MAJCOMs.

2.2.3.5. Coordinates MAJCOM and Air Staff requests for DESC optimization studies.

2.2.3.6. Coordinates draft Air Force publication and policy revisions with MAJCOM staffs and support agencies prior to submission to HQ USAF/ILGM for HQ Air Force staffing, approval and publishing.

2.2.3.7. Consolidates MAJCOM Energy Policy Act plans and validates against DESC capabilities for HQ USAF/ILGM approval.

2.2.4. Manages the Air Force fuels requirement program.

2.2.4.1. Validates, consolidates and coordinates annual fuel requirements with DESC and MAJCOMs.

2.2.4.2. Develop, validate and coordinate inventory levels of Peacetime Operating Stock (POS) with DESC annually.

2.2.5. Publishes the Air Force Fuels Directory annually.

2.2.6. Service Control Point for Air Force fuel quality assurance/product engineering issues.

2.2.6.1. Provides technical support and quality assurance for fuels, lubricants, chemicals, propellants, and gases worldwide.

2.2.6.2. Manages the 42B Technical Order series for on-base quality control guidance and operates the aerospace fuels area laboratories providing testing services to bases on fuel samples and other related products.

2.2.6.3. Arranges contract testing on an emergency basis at designated locations.

2.2.6.4. Performs product service engineering.

2.2.6.5. Staffs the Air Force Petroleum, Oil, Lubricants (POL) Technical Assistance Team which provides technical assistance to detect and correct deficiencies in product quality, handling procedures, and fuel systems (See **Attachment 13**).

2.2.7. Functions as the Air Force lead for the Fuels Automated System (FAS).

2.2.7.1. Manages Air Force testing of new systems and interfaces.

2.2.7.1.1. Coordinates testing requirements with MAJCOMs and test locations.

2.2.7.1.2. Provides test results to DESC with recommended improvements and proposed corrective action.

2.2.7.2. Administers system change requests and Air Force recommended system upgrades.

2.2.7.3. Develops Air Force specific policy and procedures regarding the Fuels Automated System and coordinates release with HQ USAF/ILGM.

2.2.7.4. Provides oversight for FAS Helpdesk trouble reporting and facilitates resolutions with applicable agencies.

2.2.7.5. Oversees the Air Force rejects and disseminates to MAJCOMs for solutions and/or requests for formal assistance.

2.2.8. Manages the Petroleum Resource Automated Management (PETROL RAM) program:

2.2.8.1. Automatic Tank Gauging (ATG).

2.2.8.2. Automated Fuels Service Station (AFSS).

2.2.8.3. Mobile Automated Fuels Service Station (MAFSS).

2.2.8.4. Aircraft Data Collection/Fuels Dispensing Systems (ADC/FDS).

2.2.8.5. Pump and valve control.

2.2.9. Acts as an Air Force liaison to the DESC Operations Center during contingencies and exercises.

2.2.9.1. Staffs the DESC Operations Center to provide operational and technical assistance to the warfighter.

2.2.9.2. Performs fuels site surveys and technical assistance visits upon request.

2.2.9.3. Advises DESC on operational and product requirements affecting Air Force units.

2.3. Defense Energy Support Center (DESC). Acts as the worldwide-integrated materiel manager (IMM) for bulk petroleum products IAW DoD 4140.25M.

2.3.1. In CONUS areas, DEO/DERs monitor customer activity, capability, and operating practices.

2.3.2. In overseas areas, the Joint Petroleum Office (JPO) of the unified commands provide assistance to DESC and DEO/DERS for IMM responsibilities.

2.3.3. Furnishes DD Form 448, **Military Interdepartmental Purchase Request** (MIPR), for the estimated reimbursements and funds recurring environmental expenses and MR&E IAW DoD 4140.25M, *DoD Management of Bulk Petroleum Products, Natural Gas and Coal*.

2.4. Major Command (MAJCOM), Direct Reporting Unit (DRU), and Field Operating Agency (FOA).

2.4.1. All MAJCOMs, DRUs, and FOAs:

2.4.1.1. Provide guidance to ensure that assigned units comply with this instruction.

2.4.1.2. Review and validate fuels vehicle and equipment authorizations.

2.4.1.3. Plan and program for fuels facilities required to carry out organizational responsibilities.

2.4.1.4. Consolidate, validate, and submit fuel and missile propellant requirements to AFPET.

2.4.1.5. Promote supply, maintenance, security, and safety discipline in all fuels operations.

2.4.1.6. Obtain quotas for technical training.

2.4.1.7. Participates in energy conservation and energy security programs IAW current environmental legislation.

2.4.1.7.1. Consolidate base level Alternative Fuel Compliance Plans.

2.4.1.7.2. Coordinate with MAJCOM Transportation to ensure compliance with MAJCOM goals for the Energy Policy Act and Executive Orders.

2.4.1.7.3. Submit consolidated plans annually to AFPET.

2.4.1.8. Develop fuels support for war and contingency plans.

2.4.1.9. Validate the War Consumable Distribution Objective (WCDO) document, and the Inventory Management Plan (IMP).

2.4.1.10. Develops fuels wartime requirements in accordance with the War Mobilization Plan and sends courtesy copy to AFPET.

2.4.1.11. Manages Fuel Mobility Support Equipment (FMSE)/Fuels Operational Readiness Capability Equipment (FORCE) storage and training, and programs funding for command FMSE/FORCE schoolhouse operations.

2.4.1.12. Ensures units comply with all federal, state, local and foreign government environmental laws and regulations.

2.4.1.13. MAJCOMs will coordinate with AFPET on all fuels equipment, including refueling units, FMSE/FORCE, and hydrant servicing vehicles.

2.4.2. The Air Force Logistics Management Agency (AFLMA) is a forward operating agency (FOA) assigned to HQ USAF/IL and reports directly to HQ USAF/ILG. The AFLMA:

2.4.2.1. Conducts logistics improvement studies and consulting efforts to increase Air Force readiness and combat capability.

2.4.2.2. Develops, evaluates, and recommends improved concepts and methods to enhance logistics efficiency and effectiveness.

2.5. Squadron Commander.

2.5.1. Resolves problems with maintenance of installed fuels facilities and equipment.

2.5.2. Budgets, requisitions, and accounts for all deicing fluid in their area, alcohol products, and packaged and drummed oils.

2.5.3. Provides personal and safety equipment.

2.5.4. Reviews semiannual inspections.

2.6. Base Civil Engineer (BCE).

2.6.1. Maintains permanently installed fuels facilities and equipment. Provides 24-hour maintenance support.

2.6.2. Provides the Section G-7 of the Comprehensive Plan “Liquid Fuel System” Map.

2.6.2. **(ANG)** The Tab G-7 (Liquid Fuel System Drawings) is simply the blueprints, schematics, or drawings depicting the fuels system (e.g., transfer lines, tanks, buildings, pits, etc.).

2.6.3. Provides detailed schematic charts and specific operating instructions for each pump house, bulk storage area, hydrant area, and service station.

2.6.4. Provides base pipeline inventories (capacity in US gallons) and certified gauging charts (in 1/8-inch increments and US gallons) for each storage tank designated by fuels management.

2.6.5. Paints, marks, and color codes permanently installed fuel facilities, to comply with MIL-STD-101, *Color Code for Pipelines and for Compressed Gas Cylinders*, MIL-STD-161, *Identification Methods for Bulk Petroleum Products Systems Including Hydrocarbon Missile Fuels*, and AFOSH STD 91-501 Chapter 20, *Safety Color Coding, Labeling, and Marking for Piping Systems*.

2.6.6. Provides emergency power for fuels facilities according to AFI 32-1063, *Electrical Power Systems*.

2.6.6. **(ANG)** Provides emergency power for fuels facilities according to AFI 32-1063. When emergency generators are not pre-positioned at fuels facilities, a Memorandum of Agreement between BCE and Fuels Management will be written detailing how emergency power will be provided to fuels facilities, when required.

2.6.7. Provides or contracts vegetation control and grass cutting in fuels management areas (includes dikes and cut and cover tanks).

2.6.8. In coordination with Fuels Management, establishes a winterization program to remove snow, and prevent water accumulation in tank roof drains.

2.6.9. Inspects, cleans or deactivates tanks and removes tank bottoms and sludge. **NOTE:** Fuels management personnel do not assist in removing manhole covers or engage in any task associated with tank inspection or cleaning. See T.O. 37-1-1, *General Operation and Inspection of Installed Fuel Storage and Dispensing Systems*.

2.6.9.1. Performs all operations in a manner that complies with all federal, state, local and foreign government laws and regulations.

2.6.10. Performs corrosion control on fixed facilities.

2.6.11. Maintains a war reserve level on dispensing system filter elements.

2.6.12. Provides a sunroof over liquid oxygen and liquid nitrogen storage tanks.

2.7. Vehicle Management Flight.

2.7.1. Maintains vehicles, hose carts, mobile pantograph systems, Forward Area Refueling Point (FARP) equipment and Fuels bare-base assets (FMSE/FORCE- excluding bladders, seal drums, and additive injectors).

2.7.2. Accomplishes meter calibration, filter-separator element changes, hydrostatic hose testing, and other scheduled maintenance actions.

2.7.3. Maintains, orders, and installs fuel couplers, connections, nozzles, strainers, decals, and related items.

2.7.4. Accomplishes a corrosion control program on refueling equipment.

2.7.5. Promptly responds to towing requests for inoperative fueling vehicles.

2.7.6. Assists the fuels preventive maintenance checkpoint to correct minor discrepancies on the spot.

2.7.7. Maintains a war reserve level on refueling equipment filter separator elements.

2.7.8. Annually reviews vehicle depot maintenance requirements.

2.8. Aircraft Maintenance.

2.8.1. Coordinates refueling support requirements and schedules maintenance activities to minimize any delay of refueling support during aircraft servicing operations.

2.8.2. Furnishes the weekly aircraft utilization and maintenance schedule and promptly notifies the FMT of schedule changes.

2.8.3. Assists fuels personnel in positioning refueling equipment.

2.8.4. Connects and disconnects nozzles and couplers.

2.8.5. Assists in filling liquid oxygen and nitrogen servicing carts.

2.8.6. Establishes aircraft fuel servicing requests through the Command Post maintenance coordination function. Where more than one agency requests fuel servicing, the Command Post provides written servicing priorities for assigned, tenant, and transient aircraft.

2.8.7. Parks or tows aircraft to hydrant outlets.

2.8.8. Provides the reason for defuel, estimated quantity, and the fuel grade to the Resource Control Center.

2.8.9. Prior to defuel, verifies the last grade of fuel serviced to the aircraft by checking AFTO Form 781F, **Aerospace Vehicle Flight Report and Maintenance Document**. **NOTE:** If aircraft was fueled with JP-8+100 or any grade other than grade identified at time of dispatch, notify the Fuels Resource Control Center prior to starting defuel operation.

2.8.10. Segregates and recovers petroleum products drained from aircraft and support equipment.

2.8.10.1. Develops procedures and trains personnel on preventing commingling and introduction of liquid or solid wastes into collection containers.

2.9. Missile Maintenance. Forecasts and reports missile propellants requirements according to AFMAN 23-110, Volume 1, Part Three.

2.10. Wing Safety Office. Performs annual inspections of the fuels flight in conjunction with annual unit inspection. Performs other inspections requested by the FMT.

2.11. Base Bioenvironmental Engineering. Performs required inspections of fuel functions and upon request of the FMT.

2.12. Wing/Group/Organization Commanders.

2.12.1. See paragraph **1.12.** for wing and group commander hydrant use responsibilities.

2.12.2. See paragraph **6.11.** for support group commander's responsibilities concerning the entry and exit control of petroleum transport vehicles.

2.12.3. See paragraphs **1.13.** and **1.14.** for the organization commander's responsibilities concerning organizational fuel tanks and vehicle fuel servicing.

Chapter 3

IMPLEMENTING THE OCCUPATIONAL SAFETY AND HEALTH PROGRAM

3.1. The FMT:

3.1.1. Ensures the fuels management function complies with all applicable DoD and Air Force Occupational Safety and Health Instructions to protect the health of personnel exposed to fuel.

3.1.2. Develops and implements cost-effective business improvements and process reengineering initiatives to minimize and control environmental, safety and occupational health risks.

3.1.3. Applies Operational Risk Management (ORM) techniques IAW AFI 90-901, *Operational Risk Management*, to identify and manage risks, comply with environment, safety and occupational health standards, improve performance, enhance personnel effectiveness and, where possible, reduce costs.

3.2. Providing Protective Equipment and Personnel Clothing.

3.2.1. The FMT budgets for and provides protective equipment to all fuels personnel. Protective equipment includes:

3.2.1.1. Cold and foul weather gear.

3.2.1.2. Earplugs or ear protectors for high noise areas.

3.2.1.3. Cream or soap to prevent dermatitis.

3.2.1.4. Goggles and visors for eye hazard areas.

3.2.1.5. Specialized gloves and aprons and coveralls for handling hazardous materiel. (This may include tri-layer coveralls identified for use in "wet fuel operations" such as bladder clean-up operations.

3.2.1.6. Coordinate with Wing Safety and Base Bioenvironmental Engineering for equipment needed for entering toxic environments, i.e., permit required confined spaces.

3.2.1.7. Other personal protective equipment (PPE) required by Base Bioenvironmental Engineering or Safety.

NOTE: Consult with Base Bioenvironmental Engineer (BEE) on all matters regarding the provision of, or changes to, PPE for workers covered under this instruction.

3.2.2. The FMT ensures:

3.2.2.1. Personal safety equipment is properly inspected and used/worn including safety toe boots.

3.2.2.2. Personnel are aware of potential occupational hazards and how to protect themselves.

3.2.2.3. Physical examinations for occupational health are performed in a timely manner.

3.2.2.4. Rubberized foul weather gear, gortex uniforms, wool socks, wool glove inserts, or arctic parka caps (where authorized) are available for use.

3.2.2.5. Personnel receiving, storing, issuing, and sampling petroleum and cryogenic products wear protective clothing per AFOSH Standards 91-501 Chapter 14, *Personal Protective Equip-*

ment, and 91-67, *Liquid Nitrogen and Oxygen Safety*, and T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*. These items are allowed in AS 016.

3.2.2.6. Fuels personnel wear reflective vests, armbands, belts or other safety devices currently listed in AS 016 during hours of darkness or reduced visibility.

3.2.2.7. Emergency showers or eyewashes and spill clean-up materiel are available.

3.2.2.8. Safety observers working in the cryogenics area must wear the same level of personal protective equipment being worn by the fuels specialist performing the task in the event assistance is required.

3.3. Two-Person Policy.

3.3.1. The FMT ensures commercial contractor employees, aircraft maintenance technicians, or other individuals acting as a second person during a fuel or cryogenic operation are knowledgeable of the hazards involved and corrective actions to take in an emergency (see para **1.9.**).

3.3.2. Two people must be present when:

3.3.2.1. Servicing aircraft, including refueling, defueling and hot refueling.

3.3.2.2. Issuing fuel to organizational tanks.

3.3.2.3. Enter confined spaces IAW AFOSH STD 91-25, *Confined Spaces*.

3.3.2.4. Gauging and sampling above ground tanks. **NOTE:** When gauging a floating roof tank from the roof, or when anyone descends to the roof, one person remains on the platform at the top of the tank shell. In gauging all other types of above ground tanks, one person remains on the ground. (Exception: above ground low profile tanks under 10 ft). When required, personnel must use a self-contained breathing apparatus when descending onto floating roof tanks equipped with geodesic domes.

3.3.2.5. Receiving, generating or transferring cryogenic fluids.

3.3.2.6. Transferring high-pressure gases.

3.3.2.7. Off-loading tank cars or tank trucks.

3.3.2.8. Filling trucks or returning fuel to bulk storage.

NOTE: Does not apply when returning fuel to a storage tank equipped with an operational automatic high-level shut-off valve and the truck has an operational deadman control system. This also does not apply during fillstand operations when the fillstand is equipped with an operational deadman control or Scully-type overfill prevention system. These one-person operations do require constant contact with the RCC.

3.3.2.9. Transferring and receiving fuel. Requires one person at the transfer point and one person at the receiving point.

3.3.2.10. Collecting fuel samples from fixed fuel systems. **NOTE:** One person takes the sample and the second person is in the general area and is aware of the operation.

3.3.2.11. Performing laboratory operations IAW AFOSH STD 91-38, *Hydrocarbon Fuels-General*.

3.4. Preventing Fires.

3.4.1. Controlling Smoking Materials.

3.4.1.1. Do not smoke or use spark/flame-producing devices in any refueling unit, fuel pump house, fuel or cryogenics storage/production area, or laboratory (excluding flashpoint tester).

3.4.1.2. Post and enforce smoking restrictions.

3.4.1.3. The fire department designates smoking areas.

3.4.2. Controlling Static Electricity.

3.4.2.1. The fuels safety monitor familiarizes personnel with the nature of static electricity and the hazards of static charges when handling fuels, as outlined in T.O. 00-25-172.

3.4.2.2. Do not don or remove outer garments within the Fuels Servicing Safety Zone. Clothing restrictions are outlined in T.O. 00-25-172.

3.5. Laboratory Safety.

3.5.1. Use specialized laboratory equipment.

3.5.2. Fuels laboratory personnel must take precautions to ensure the area is safe for testing.

3.5.3. See AFOSH STD 91-38, *Hydrocarbon Fuels-General*.

3.6. Limiting Foreign Object Damage (FOD).

3.6.1. FOD prevention procedures will be accomplished IAW AFI 21-101, *Aerospace Equipment Maintenance Management*.

3.6.2. Inspect all fueling equipment for foreign objects during the daily operator inspection.

3.6.3. When operating vehicles on unpaved surfaces, inspect for, and remove foreign objects before traveling on the flight line.

3.6.4. Do not drive fueling vehicles over “FOD shakers”.

Chapter 4

ESTABLISHING A SECURITY PROGRAM

4.1. Duties of the Security Monitor.

4.1.1. Review security plans, programs, and training, and recommend improvements.

4.1.2. Provide all fuels personnel with security training. Conduct training on arrival and annually thereafter.

4.1.3. Conduct an information security program according to AFI 31-401, *Information Security Program Management*.

4.1.4. Familiarize fuel personnel required to enter or approach controlled or restricted areas with AFI 31-101, *The Air Force Installation Security Program*.

4.1.5. Consult the Base Resource Protection Committee concerning fuels facilities, equipment, and petroleum products protection.

4.1.6. Instruct computer operators on computer security procedures outlined in AFI 33-202, *Computer Security*. The FMT can delegate this responsibility to the Fuels Work Group Manager.

4.1.7. Institute measures to secure fillstand servicing controls and fueling units required by T.O. 37-1-1, *General Operation and Inspection of Installed Fuel Storage and Dispensing Systems*.

4.2. Securing Fuels Facilities and Equipment.

4.2.1. When not attended, the FMT locks:

4.2.1.1. All access and dispensing points on ground fuel equipment. Secure sump and tank drains in a manner which prevents access to cargo tank contents.

4.2.1.2. Dispensing pump nozzle handles or main power source, except on automated dispensing pumps.

4.2.1.3. Gates of all fenced areas within fuels management control when areas are not staffed or under surveillance.

4.2.1.4. Gauge hatches and other access points on all storage and hydrant tanks outside of protected (fenced) areas unless exempted by the Base Resource Protection Committee.

4.2.1.5. Electrical control panels and bulk fuel off-loading systems outside protected areas.

4.2.1.6. Attach locks to a hasp, chain, handle, or other device of equivalent protective strength.

4.2.2. Establish proper key control. (Recommend magnetic locks for areas where climatic conditions are severe.) Obtain prior approval from the local Resource Protection Committee to use combination locks.

Chapter 5

DUTIES OF THE FUELS MANAGEMENT TEAM

5.1. Fuels Management Team (FMT). The Fuels Management Flight Commander (FMFC) and Fuels Manager/Superintendent form a two-person team to maintain command and control to prevent the use of unsatisfactory products or unserviceable equipment and to:

5.1. (ANG) Fuels Management Team (FMT). The ANG does not have FMFC, therefore, the Logistics Readiness Squadron (LRS) Commander (or his designated representative) and the Fuels Superintendent will comprise the FMT.

5.1.1. Manage the requisition, receipt, storage, issue, quality, accounting of petroleum fuels, and the requisition and accounting of missile propellants.

5.1.2. Manage fuel servicing and cryogenic operations and ensure compliance with the aircraft servicing priority listing.

5.1.3. Maintain prepositioned war reserve stocks (PWRS) and develop emergency fuel support plans.

5.1.4. Validate all operational, contingency/exercise and base support plans requiring fuel support, when required by the unit mission.

5.1.5. Establish and coordinate equipment and facility minimum essential levels with Refueling Maintenance (RFM) and Liquid Fuels Maintenance (LFM).

5.1.6. **(Added-ANG)** Position titles and duties referred to in AFI 23-201 will be assumed during Unit Training Assemblies (UTAs). The flight's fulltime staff will conduct required inspections, spot checks, and reviews.

5.2. Establishes the Fuels Administrative and Work Group Manager (WGM) Functions:

5.2.1. The Fuels Administrative Supervisor or civilian administrative technician:

5.2.1. **(ANG)** The ANG is not authorized a fulltime Administrative Supervisor, these duties will be performed by the fulltime staff or the traditional FISC Supervisor during UTAs and Annual Field Training (AFT) periods.

5.2.1.1. Prepares and files all formal correspondence and ensures proper distribution of correspondence, reports, publications and forms.

5.2.1.2. Reviews Fuels Management Flight File Plan at least annually for accuracy and completeness. Coordinates changes with responsible Functional Account Records Managers.

5.2.1.3. Acts as the control point for maintenance of all publications, directives, and Technical Orders (T.O.s). **Attachment 1** provides a list of all major publications, T.O.s and Allowance Standards related to the fuels career field.

5.2.2. The FAS Workgroup Manager (WGM) function:

5.2.2. **(ANG)** Workgroup Manager (WGM) for the Fuel Flight will be assigned by Base Communications. The WGM may delegate the following responsibilities:

5.2.2.1. Performs backup of the systems and vital databases. Ensures data backups are performed as required on all pertinent system files. This may be accomplished by the Resource Control Center (RCC) as part of the nightly closeout process.

5.2.2.2. Develops a data file and database backup routine IAW DOD 4140.25-M and DESC Interim Policy and Procedural Guidance published at **http://www.desc.dla.mil/**:

NOTE: Retention for the fiscal year backup is three years to support manpower, refueling unit validation, and environmental reports.

5.2.2.3. Maintains backup media in accordance with AFPD 37-1, *Information Management* and AFMAN 37-123, *Management of Records* and disposed of in accordance with the RDS located at **https://webrims.amc.af.mil**. Backup media should not be stored in the immediate vicinity of the data server.

5.2.2.4. Establishes an operational user's guide library. Maintain and provide access to current versions of the Fuels Automated System (FAS) Enterprise Server (FES) User's Guide, Fuels Manager User Guide, Automated Data Collection (ADC) User Guide, Automated Fuels Service Station (AFSS)/Mobile Automated Fuels Service Station (MAFSS) User Guide and applicable Automated Tank Gauging (ATG) Operational Manuals/Guides.

5.2.2.5. Ensures system changes and program releases are accomplished as directed.

5.2.2.6. Gives assistance with software/hardware resolution and facilitates automated problems. Problem areas should be reported when known or suspected errors exist in instruction, procedures, or programs. Up channel problems to the appropriate organization/helpdesk.

5.2.2.7. When responsible for an Automated Data Processing Equipment (ADPE) account, maintains current appointment letter and conducts annual inventory reviews IAW local directives.

5.2.2.8. Serves as a focal point for all AF Form 3215s, **IT/NSS Requirements Document**, submitted by the Fuels Management Flight.

5.2.2.9. Conducts training for newly assigned personnel on the proper use of computers, to include computer security, use of email, Internet and locally used programs.

5.2.2.10. Maintains all ADPE assigned to Fuels Management to include preventative maintenance and upgrades.

5.2.2.11. Maintains a continuity book containing at a minimum: ADPE appointment letter, recent inventory listing, network layout (building or base), justification letters and other pertinent information.

5.3. Lockout/Tagout Program. The FMT:

5.3.1. Establishes a lockout/tagout program IAW AFOSH STD 91-501 Chapter 21, *Hazardous Energy Control and Mishap Prevention Signs and Tags*.

5.3.2. Assigns responsibility for caution tags to the NCOIC Fuels Laboratory.

5.3.3. Makes the determination as to which element will manage danger tags.

NOTE: Danger tags and caution tags are managed IAW the above reference. Additional guidance is provided for caution tags in paragraph **7.17.**.

5.4. Designed Operational Capability (DOC) Statements.

5.4.1. DOC Statement. Review the DOC statement to ensure the ability to provide the designated support requirements. The DOC is the baseline for Status of Resources and Training System (SORTS) reporting. Document review (at least annually) and ensure element superintendents and fuels support personnel are briefed on current requirements.

5.4.2. Unit Type Codes (UTC).

5.4.2.1. See AFMAN 10-401, V1, *Operation Plan and Concept Plan Development and Implementation*, on how UTCs are used in war planning. **NOTE:** A description of all fuels UTCs can be found in AFPAM 23-221, *Fuels Logistics Planning*.

5.4.2.2. UTC JFDES, Fuels Support Kit.

5.4.2.2.1. HQ USAF will determine which fuels management flights must maintain a JFDES fuels support kit.

5.4.2.2.2. For standardization, the kit must contain as a minimum those items identified in the Logistics Force Packaging Subsystem (LOGFOR).

5.4.2.2.3. Kits may be deployed to meet Air Force contingency requirements and may not necessarily support homestation aircraft.

5.5. Preparing Required Reports.

5.5.1. Status of Resources and Training System (SORTS).

5.5.1.1. Report IAW AFI 10-201, *Status of Resource and Training Systems*.

5.5.2. Preparing the Bulk Petroleum Contingency Report (REPOL). The REPOL report provides the Joint Staff, CSAF, HQ USAF/ILGM and the major commands with summary information on the damage and deficiencies affecting bulk petroleum supplies, storage and distribution systems.

5.5.2.1. Submit REPOL reports according to CJCSM 3150.14A, *Joint Reporting Structure Logistics* and AFI 10-206, *Operational Reporting*, or when requested. Combatant commanders will provide the report format. Current standard is to send information in a standard spreadsheet via secure network.

5.5.2.2. This report is designated emergency status code C1: continue reporting during emergency conditions, priority precedence.

5.5.2.3. Continue reporting during MINIMIZE.

5.5.2.4. Develop local procedures for processing classified reports. Coordinate support requirements when approved ADPE for processing classified materiel is not available in the workcenter.

5.6. Developing an Alert Recall Plan. The FMT:

5.6.1. Prepares and distributes an alert recall plan.

5.6.2. Ensures the plan remains current at all times.

5.6.3. Develops an alternate notification procedure to use during a telephone communications failure.

5.7. Preparing Fuel Support Plans. Use AFMAN 10-401 V1 and AFPAM 23-221 as a guide when preparing fuels appendixes to the base war support plan, operation plans, and mobility support plans. Basic references required to prepare a valid support plan include:

5.7.1. Inventory Management Plan extract.

5.7.2. Aircraft Parking Plan.

5.7.3. Base Wartime Aircraft Activity (WAA) Report.

5.7.4. Air Mobility Command minimum ground times.

5.7.5. Time-Phase Force Deployment Data (TPFDD).

5.7.6. Integrated Consumable Item Support (ICIS) fuels module.

5.8. Reviewing the War and Mobilization Plan (WMP). Coordinate with logistics plans personnel to review the WMP, Vol 4, Wartime Aircraft Activity (WAA) Report to ensure you can support the aircraft activity listed.

5.9. Maintaining Prepositioned War Reserve Stock (PWRS).

5.9.1. Inventory Management Plan (IMP). Review IAW DoD 4140.25M. MAJCOMs provide the bases their extract from the IMP.

5.9.2. Prepositioned War Reserve Materiel Stock (PWRMS) for Non Petroleum Products. Refer to AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures*.

5.9.2.1. Maintain LOX/LIN War Consumable Distribution Objective (WCDO) levels through in-house production and/or a commercial source.

5.9.3. Penetration of Minimum Inventory Levels. Report minimum inventory penetrations exceeding a 72-hour period according to DoD 4140.25M. Forward an information copy to the MAJCOM Fuels Office.

5.9.4. Maximum 1 day requirements:

5.9.4.1. Coordinate with base LGX to obtain MAX 1-day requirements from the WMP.

5.10. Fuels Facility Plan. Obtain updated liquid fuels system drawings, Section G-7 of the Comprehensive Plan "Liquid Fuel System" Map from the BCE. Provide a current copy to parent MAJCOM during March of each odd year (i.e. 2003, 2005, etc.) and when major changes occur. Fuels managers must color code active facilities by product on drawing IAW clipboard color scheme described in **Attachment 9**. Identify all major fuels facilities by name (i.e., RCC, LAB, RFM, etc.).

5.11. Maintaining Emergency Power Capability.

5.11.1. Identify and coordinate emergency power requirements with BCE.

5.11.2. Preposition emergency generators at bulk storage and hydrant facilities.

5.11.3. Write procedures in emergency support plans to provide power when generators cannot be prepositioned.

5.11.4. Train fuels personnel to operate emergency power generators according to AFI 32-1063, *Electrical Power Systems*.

NOTE: Fuels personnel are not authorized to verify the emergency power generator wiring. BCE personnel will ensure the proper generator connection. Only generator qualified fuels personnel will operate generators after BCE connections are complete.

5.11.4. **(ANG)** The BCE and Fuels Management will jointly determine emergency generator requirements, positioning, training, and operations for fuels facilities. When emergency generators are not pre-positioned at fuels facilities, a Memorandum of Agreement between BCE and Fuels Management will be written detailing how emergency power will be provided to fuels facilities, when required.

5.12. Operating a Fuels Radio Net. A separate radio net for the fuels management activity is required.

5.12.1. Fuels personnel will be trained on radio operation procedures and transmission discipline.

5.12.2. **Attachment 2** lists the radio transmission codes.

5.12.3. MAJCOMs may waive the single net requirement at low use locations.

5.13. Facility Requirements. When developing or reviewing fuels facilities project requests, refer to Air Force Handbook (AFH) 32-1084, *Facility Requirements*. This handbook provides facility space allowance criteria by category code and its companion document, AFI 32-1024, *Standard Facility Requirements*, lists OPRs and provides an overview of the facility requirements system. Cold weather locations will be provided with an indoor preventive maintenance facility. MIL-HDBK-1022A, *Petroleum Fuel Facilities* provides guidelines for new construction of POL facilities.

5.13. (ANG) Facility Requirements. Also reference ANG Handbook 32-1084.

5.14. Computing Refueling Equipment Authorizations.

5.14.1. Use AS 019 and AFM 23-413, *Fuels Automated System* in conjunction with the ASC program to compute vehicle authorizations.

5.14.2. Review authorized fueling vehicles (aviation and ground products), including WRM vehicles, every two years or when mission changes dictate, to determine if shortages or overages exist.

5.14.3. Furnish a copy of the validation coordinated through the Vehicle Management Flight to the MAJCOM.

5.14.4. Maintain source documents until the completion of the next validation.

5.14.5. Refer to AS 019 for type and number of vehicles to accomplish various refueling operations.

5.14.6. Refer to the Vehicle Validation Procedures located on the AFPET website for step-by-step instructions.

5.15. Providing Covered Structure for Fueling Units. In cold weather and heavy snowfall areas, submit a work request for heated facilities to park fueling units.

5.16. Understanding the Management Engineering Program (MEP). See **Attachment 10** for general information on the MEP.

5.16. (ANG) Understanding the Management Engineering Program (MEP). Paragraph **5.16.** and all sub-paragraphs are not applicable to the ANG.

5.16.1. Fuels functional responsibilities in the MEP:

5.16.1.1. Know the Air Force Manpower Standard (AFMS) for Fuels Management Air Force Manpower Document (AFMD) 41D1.

5.16.1.2. Evaluate the number of people assigned to the fuels flight.

5.16.1.3. Take action to identify personnel overages/shortages.

5.16.1.4. Request manpower to accomplish the mission as necessary.

5.16.2. Take a proactive role during the manpower standards development process:

5.16.2.1. Know the study schedule.

5.16.2.2. Provide recommendations to the function review workshop.

5.16.2.3. Review all study documentation such as work center description, measurement plan, and final report for accuracy and provide any corrections.

5.16.2.4. Verify measurement data accuracy.

5.16.2.5. Coordinate on manpower variances.

5.16.2.6. Assist in developing work center productivity enhancements.

5.16.2.7. Submit manpower change requests to local Manpower Office.

5.16.2.8. Assist the Manpower Office in assessing and validating wartime manpower requirements.

5.16.3. Monitor the Unit Manpower Document (UMD) and Unit Personnel Management Roster (UPMR).

5.16.3.1. Monitor increases and decreases in the unit's authorized strength to ensure the authorized number of people are sufficient to do the job.

5.16.3.2. Review the UPMR to ensure it reflects the people assigned against the number of positions authorized on the UMD.

5.16.3.3. Coordinate with the Manpower Office to correct errors.

5.17. Developing Alternative Fuel Compliance Plan (AFCP).

5.17.1. IAW MAJCOM guidance, annually develop a combined Fuels and Transportation plan to comply with Energy Policy Act and Executive Orders requiring the use of alternative fuels.

5.17.2. Identify best use of alternative fuels.

5.17.3. Determine shortfalls in tankage and dispensing systems to handle all products required to support the AFCP.

5.17.4. Develop AFCP projects IAW para **1.4.**

Chapter 6

CONDUCTING FUELS OPERATIONS

Section 6A—Fuels Operations Superintendent

6.1. Duties of the Fuels Operation Superintendent.

6.1.1. Supervises the distribution, storage, cryogenics and propellants storage functions.

6.1.2. Reviews aircraft flying schedules for fuels support requirements and tailors work shifts accordingly.

6.1.3. Provides proper security, storage, and operator maintenance of assigned equipment.

6.1.4. Submits requests for facility and equipment changes.

6.1.5. Reviews Compliance evaluation reports and validates corrective actions.

6.1.6. Reports training requirements to the fuels training supervisor.

6.1.7. Manages assigned vehicles.

6.1.8. Establishes product rotation procedures for hydrant and bulk storage facilities, IAW DoD 4140.25M, Vol II, Chapter 7*, Quality Surveillance*.

6.1.9. Regularly use all tanks, transfer pipelines, pumps, meters, filter-separators, and fillstands to help prevent deterioration of pumps, seals, and gaskets.

6.1.10. Exercise alternate resupply/receipt mode capability at least annually to validate training, facilities and Base Support Plan capabilities. If your alternate resupply mode is tank truck or rail car, ensure the offloading area is in compliance with environmental regulations. Coordinate with base Environmental shop to see if there are acceptable workarounds or temporary measures to allow you to exercise your alternate capability. Program for MR&E to bring the area in compliance with environmental regulations.

6.1.10. **(ANG)** Alternate re-supply/receipt modes will only be exercised annually at those locations having two modes of receipt (pipeline, barge, tank car, or tank truck). Locations having only one receipt mode are exempt from this requirement. Base fuels personnel will coordinate with ANG/LGSF and DESC to exercise their alternate receipt mode capability. When alternate receipt capability cannot be accomplished, base fuels personnel will explain reason for non-compliance in their request for a waiver from ANG/LGSF.

Section 6B—Fuels Distribution

6.2. Duties of the NCOIC Fuels Distribution.

6.2.1. Supervises expeditors, hydrant refueling, mobile refueling, and preventive maintenance.

6.2.2. Assists the fuels operations superintendent in performing the duties listed in paragraph **6.1.** and ensures actions directed by the RCC are accomplished in a safe and efficient manner.

6.2.3. Establishes an effective daily preventive maintenance program to ensure maximum serviceability of all fueling equipment and facilities.

6.2.4. Coordinates with BCE and vehicle maintenance on schedule maintenance and deficiencies.

6.2.5. Reviews aircraft flying schedules to ensure resources are available to accomplish fueling operations.

6.2.6. Spot-checks operator's preventive maintenance, flight-line operations, and vehicle checkpoint procedures.

6.2.6. **(ANG)** Change Spot Check to Monitor.

6.2.7. Reviews inspection records for permanently installed hydrant facilities, AFTO Form 39, **Fuel System Inspection and Discrepancy Report**.

6.2.8. Reviews the FAS automated Logsheet daily and takes corrective action when necessary.

6.2.8. **(ANG)** These duties will be performed by individual performing daily closeout.

6.3. Duties of the Fuels Expediter.

6.3.1. Assists in coordinating and directing fuel servicing operations.

NOTE: A flightline expediter should be utilized any time mobile fueling is being accomplished (Does not apply to ground fuel servicings). There may be times and situations where this is not possible because expeditor is performing other duties.

6.3.2. Evaluates fueling operations, initiates action to correct deficiencies, terminates unsafe operations, and reports discrepancies.

6.3.3. Maintains a tool kit for on-the-spot repairs and assists operators with problems.

6.3.4. Maintains a spill response kit for containment/clean-up of small leaks or spills. (Notify Fuels Environmental Coordinator each time kit is used.)

6.3.5. Maintains a Foreign Object Damage (FOD) collection bag/box in the expeditor vehicle. Reports all foreign objects found in fuels vehicles or the flightline to the NCOIC Fuels Distribution.

6.3.6. Provides assistance for hydrant servicing operations.

6.3.7. Maintains close liaison with the RCC to report progress of operations and coordinate changes in scheduled work plans.

6.3.8. Establishes a tool control program with periodic inventory to account for tools.

6.4. Duties of the Hydrant Supervisor.

6.4.1. Coordinates operator's maintenance of the hydrant system.

6.4.2. Establishes a hydrant system flushing program according to T.O. 37-1-1.

6.4.3. Updates the hydrant status board in FAS.

6.4.4. Transfers fuel between bulk storage and hydrants.

6.4.4.1. Coordinates the transfer by telephone or radio.

6.4.4.2. Bulk storage and hydrant operators must remain in the immediate vicinity for the entire transfer IAW T.O. 37-1-1.

6.4.4.3. Establish contact every 10 minutes between the transfer and receiving points during the last 30 minutes of the estimated transfer completion time.

6.4.4.4. For those bases with Fuels Manager software program installed, monitor transfer/receipt progress during operation.

6.5. Duties of the Mobile Refueling Supervisor.

6.5.1. Coordinates with the fuels training supervisor for drivers' training school, if required, and ensures personnel are certified on the equipment.

6.5.2. Initiates driver disqualification action when an individual's attitude, mental, or physical conditions are potentially unsafe for operating vehicles.

6.5.3. Familiarizes refueling unit operators with flight line safety, aircraft parking ramps, runway crossings, aircraft taxiways, and control tower signals.

6.6. Duties of the Preventive Maintenance Supervisor.

6.6.1. Inspects refueling vehicles/equipment.

6.6.2. Performs inspections each day the vehicle/equipment is used.

6.6.3. Inspects all vehicles/equipment at least every 7 days.

6.6.4. Uses the operator's inspection guide and trouble report.

6.6.5. Removes unsafe or inoperable vehicles/equipment from service and turns equipment over to the appropriate maintenance activity for corrective action.

6.6.6. Coordinates with refueling maintenance to ensure all required vehicles/equipment are turned in on time for scheduled and unscheduled maintenance inspections.

6.6.7. Trains personnel to properly inspect and record operator's inspection results on appropriate forms. Coordinates with Refueling Maintenance to ensure compliance with local, state and federal laws.

6.6.8. Reviews the vehicle operator inspection forms and ensures each vehicle or piece of equipment is checked before it is released for service.

6.6.9. Updates the truck status board in FAS.

6.6.10. Establishes an effective mobile equipment corrosion control program.

6.6.11. Establishes a special purpose vehicle checkpoint.

6.6.11. **(ANG)** Daily vehicle team checkpoint cannot be accomplished due to manning. Special purpose vehicle operator pre-check inspections will be performed and annotated on applicable forms (AF IMT 1807, *Operator's Inspection Guide and Trouble Report {Fuel Servicing}*). Perform a complete team checkpoint operation on all assigned vehicles each UTA day regardless of projected flying schedule.

6.6.11.1. Use a team concept and assign specific tasks to team members. For example, one member operates the vehicle; another is placed in front of the unit and another to the rear.

6.6.11.2. Develops specific checklist and training plan outlining responsibilities of each team member.

6.6.11.3. The team chief annotates the discrepancies on applicable forms.

6.6.11.4. Team members take vehicles with discrepancies that are not waived or deferred, to the refueling maintenance shop.

6.6.11.5. Inspect pre-positioned or dispersed vehicles in place at the option of the FMT.

6.6.11.6. A vehicle checkpoint is not required at non-flying activities, but operator inspection is required according to applicable equipment/vehicle Technical Orders.

6.6.11.7. A covered shelter is required for checkpoint operations. Develops specific facility requirements and justification based upon local weather conditions and mission requirements.

6.6.12. Performing Vehicle Pre-check. In addition to the daily inspection each vehicle operator performs a pre-check prior to use:

6.6.12.1. Check applicable vehicle inspection form to ensure the vehicle was inspected at checkpoint within the last 24 hours.

6.6.12.2. Perform a "walk around" inspection of the vehicle, checking for damage, fluid leaks, and other obvious discrepancies such as flat tires.

6.6.12.3. Do not move the vehicle if it fails the check.

6.6.12.4. Report the discrepancy to the RCC and take corrective action per instructions.

Section 6C—Fuels Bulk Storage

6.7. Duties of the NCOIC Bulk Storage.

6.7.1. Supervises bulk storage, service station, and cryogenics storage except when a separate cryogenics production element is authorized.

6.7.2. Coordinates receipt, storage, transfer, and inventory of bulk/packaged fuels, deicing fluid, methanol, anhydrous ammonia, compressed gas cylinders, Liquid Oxygen (LOX), Liquid Nitrogen (LIN), Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG) and other fuel products.

6.7.3. Ensures proper fuel sampling procedures are adhered to during receipts. Coordinate with Lab Supervisor to ensure samples are properly recorded in FAS.

6.7.4. Coordinates inspection and organizational maintenance on all bulk storage facilities and equipment.

6.7.4.1. Records deficiencies or malfunctions on AFTO Form 39, **Fuel System Discrepancy and Inspection Record**.

6.7.4.2. Obtains service call numbers from BCE and enters them on the AFTO Form 39.

6.7.4.3. Ensures BCE personnel properly document the AFTO Form 39 when the deficiencies are corrected.

6.7.4.4. Observes the condition and performance of installed filters, separators, and strainers.

6.7.4.5. Updates the storage status board in FAS.

6.7.5. Coordinates with the BCE on scheduled maintenance and tank cleaning.

6.7.6. Transfers fuel between bulk storage and hydrants.

6.7.6.1. Coordinates the transfer by telephone or radio.

6.7.6.2. Bulk storage and hydrant operators must remain in the immediate vicinity for the entire transfer IAW T.O. 37-1-1.

6.7.6.3. Establish contact every 10 minutes between the transfer and receiving points during the last 30 minutes of the estimated transfer completion time.

6.7.6.4. For those bases with Fuels Manager software program installed, monitor transfer/receipt progress during operation.

6.7.7. Takes inventories according to DoD 4140.25M.

6.7.8. Base Service Station.

6.7.8.1. Maintain a service station to provide automotive gasoline, diesel fuel, and AF/ILGM approved alternative fuels for all authorized vehicles and equipment.

6.7.8.2. Ensure the service station is equipped with a phone accessible to customers for use in reporting emergencies. Post a sign listing operating hours and contact point for after hours support.

6.8. Preventing Fuel Commingling.

6.8.1. A product selection device (different size couplers and nozzles) is required when more than one grade of fuel is handled on an installation. A lock control system is an alternative to product selection devices in order to prevent commingling.

6.8.2. If the tank contains a common receipt/issue line, displace the defueled product into the tank prior to issue from the tank.

6.8.3. Do not return fuel through gauging hatches.

6.9. Verifying the Condition of Fuel Tank Trucks and Cars.

6.9.1. The FMT will ensure tank trucks and tank cars are inspected for hazardous conditions before off-loading.

6.9.2. If hazardous conditions exist:

6.9.2.1. Refuse the receipt.

6.9.2.2. As the FMT deems appropriate, notify the local traffic management officer, base safety officer, the base fire chief, the quality assurance representative, MAJCOM, and AFPET who, in turn, will coordinate action with DESC Contracting Division.

6.9.2.3. Document all refusals in writing within 24 hours according to DoD 4140.25M, with an information copy to the parent MAJCOM, AFPET, and DEO/DER.

6.10. Duties of the Cryogenic Storage Supervisor.

6.10.1. Receives, stores, transfers, inventories, and documents transactions of Liquid Oxygen (LOX) and Liquid Nitrogen (LIN).

6.10.2. Establishes an effective cryogenics conservation program to minimize losses.

6.10.2.1. Ensure program specifics are outlined in an appropriate format, i.e. training course outline, operating instruction, etc.

6.10.3. Follows the sampling and testing program as prescribed by the 42B-series T.O.s.

6.10.4. Establishes an aggressive safety program according to AFOSH STD 91-67, *Liquid Nitrogen and Oxygen Safety*.

6.10.5. Inspects the AFTO Form 134, **Aviator's Breathing Oxygen Servicing Trailer Log (Liquid/ Gaseous)**, on all oxygen-servicing trailers in use prior to servicing. Do not service if the form is not properly annotated. See T.O. 42B6-1-1, *Quality Control of Aviator's Breathing Oxygen*, for specific responsibilities on documentation of the AFTO Form 134, quality control requirements, and restrictions on filling servicing trailers.

6.10.6. Develops written procedures to identify, report, and limit low use LOX carts. Coordinate procedures with using organizations.

6.11. Controlling Entry and Exit of Petroleum Transport Vehicles.

6.11.1. The Mission Support Group Commander designates authorized entry and exit gates for petroleum transport vehicles, and appoints personnel to serve as delivery escorts. **NOTE:** Do not assign base fuels personnel as escorts IAW AFI 23-204, *Organizational Fuel Tanks*.

6.11.2. The FMT:

6.11.2.1. Ensures all incoming petroleum transport vehicles are inspected IAW DoD 4140.25M, Vol II, Chapter 5, *Shipments, Issues and Receipts*, and re-inspected before it leaves the installation. Vehicles delivering fuel to the Base Exchange service stations or aero clubs are not inspected.

6.11.2.2. Verifies at least two copies of an appropriate receipt or delivery document reflect the date, time inspected, and signature of the inspectors who perform both the incoming and outgoing inspections. Provide one copy to the carrier and file one copy in the fuels administration office with reference documents.

6.11.2.3. Ensures that Fuels Compliance conducts random spot checks of contractor petroleum transport vehicles making single and multiple fuel delivery drops to government tanks outside of fuels management bulk storage areas. Notify appropriate agencies when discrepancies exist.

6.11.2.4. Conducts vehicle escort training and documents according to AFI 23-204. Verify that escorts or custodians are supervising and receiving deliveries according to AFI 23-204.

6.11.2.5. Ensures that vehicle escorts are trained on the actual operation they are expected to perform.

Section 6D—Missile Propellants

6.12. Managing Liquid Missile Propellants.

6.12.1. The Fuels Management Team:

6.12.1.1. Monitors and is accountable for the liquid missile propellants, cryogens, hypergols and gasses, their receipt, storage, transfer and delivery.

6.12.1.2. Monitors maintenance of facilities and equipment.

6.12.1.3. Reviews operations/handling of fuels and oxidizers for compliance with applicable directives.

6.12.1.4. Reviews and approves accounting documentation in accordance with AFMAN 23-110, Volume 1, Part Three, Chapter 4.

6.12.1.5. Monitors the Process Safety Management Program, ensuring mitigation of all hazards.

6.12.1.6. Monitors compliance with environmental requirements.

6.12.1.7. Monitors maintenance and handling of PPE and Self-Contained Atmospheric Protection Ensemble (SCAPE), and other hypergolic safety hazards.

6.12.1.8. Monitors all on-base missile and satellite programs, ensuring adequate availability of resources.

Section 6E—Cryogenics

6.13. Duties of the NCOIC Cryogenic Production and Cryogenic Production Supervisor.

6.13. (ANG) Duties of the NCOIC Cryogenic Production and Cryogenic Production Supervisor. Paragraph **6.13.** and all sub-paragraphs are not applicable to the ANG.

6.13.1. Monitors maintenance forms data to ensure procedural compliance and takes necessary corrective action.

6.13.2. Conserves cryogenics.

6.13.3. Establishes a supply account for cryogenics operations, if required.

6.13.4. Coordinates on all base projects pertaining to cryogenic products.

6.13.5. The FMT:

6.13.5.1. Assigns only personnel with SEI 037 as the cryogenics production supervisor.

6.13.5.2. In conjunction with the Fuels Training Supervisor assigns Special Experience Identifier IAW AFMAN 36-2108, *Enlisted Classification*, attachments 14 and 40.

6.14. Equipment and Facilities Used in Cryogenic Production.

6.14. (ANG) Equipment and Facilities Used in Cryogenic Production. .Paragraph **6.14.** and all sub-paragraphs are not applicable to the ANG.

6.14.1. Cryogenic Production Plants. MAJCOMs determine plant requirements based on current and programmed cryogenics support requirements and available base facility support. Various types and sizes of plants are authorized in AS488. The FMT coordinates plant approval, plant locations, arrangements, and requirements with the parent MAJCOM. Base Supply stores and issues gas cylinders according to 42B-series T.O.s and applicable supply manuals.

6.14.2. Support equipment available to the FMT and cryogenics facility requirements are found in **Attachment 5**.

6.14.3. The BCE maintains the facility, the installed property, and required utilities. The BCE forwards site selection for cryogenics storage or generating facilities to the MAJCOM Civil Engineer for approval with an info copy to the MAJCOM fuels office.

6.15. Inspecting and Operating Cryogenic Plants.

6.15. (ANG) Inspecting and Operating Cryogenic Plants. Paragraph **6.15.** and all sub-paragraphs are not applicable to the ANG.

6.15.1. Inspecting equipment. The cryogenics production supervisor inspects production plants according to applicable 36G1-series T.O.s and records maintenance on AFTO Form 244, **Industrial Support Equipment Record**, according to T.O.s 00-20-1, *Aerospace Maintenance Policy and Procedures*, and 00-20-5, *Aerospace Vehicle Inspection and Documentation*.

6.15.1.1. Reflect condition status, when inspections are due and completed, items due for replacement, and discrepancies noted with corrective action taken.

6.15.1.2. When required, use published checklists or work cards.

6.15.1.3. Record hourly plant readings on applicable plant log sheet.

6.15.1.3.1. Review these forms daily.

6.15.1.3.2. Use T.O. 00-20-5 to explain the status symbols.

6.15.1.3.3. Use the AFTO Form 95, **Significant Historical Data**, with generating and support equipment.

6.15.1.4. The FMT designates in writing personnel authorized to clear “Red X” conditions.

6.15.1.5. Calibrating Temperature and Pressure Gauges.

6.15.1.5.1. Zero out and check gauges for accuracy in conjunction with equipment inspections.

6.15.1.5.2. Document calibration or non-calibration by the owning activity according to T.O. 00-20-5.

6.15.1.5.3. Refer to T.O. 33K-1-100-CD-1 *(Calibration Procedures)* for the list of gauges requiring Precision Measurement Equipment Laboratory (PMEL) calibration by part number.

6.16. Maintaining Equipment.

6.16.1. Cryogenics personnel:

6.16.1.1. Perform daily organizational maintenance.

6.16.1.2. Perform all inspections, lubrications, and routine adjustments of equipment.

6.16.1.3. Perform intermediate maintenance of all production plants and equipment to include repair or replacement of major assemblies and components.

6.16.2. Obtaining Authority for Depot Maintenance:

6.16.2.1. When equipment maintenance requirements exceed the base capability, the FMT first considers contract maintenance.

6.16.2.2. If contract maintenance is not available, the FMT contacts MAJCOM/LGRF who, in turn, contacts WR-ALC/LESGI to determine a course of action.

6.16.2.3. MAJCOMs may authorize base-level activities to contact WR-ALC/LESGI.

6.16.2.4. The FMT requests a depot maintenance assistance site visit (see T.O. 00-25-107, *Maintenance Assistance*) through the MAJCOM only as a last resort.

6.16.3. Equipment modifications. Only qualified maintenance personnel can modify equipment, when authorized by TCTO or at item manager direction.

6.16.4. Materiel improvement program. Report materiel deficiencies on all production and product storage equipment according to paragraph **1.19.**.

6.17. Maintaining Cryogenic Storage Tanks.

6.17.1. The cryogenics supervisor:

6.17.1.1. Performs maintenance. NOTE: Only qualified personnel are authorized to operate or handle any equipment involving cryogenics fluids.

6.17.1.2. Submits work requests for corrosion control and painting.

6.17.1.3. Submits requests to modify storage containers through the parent MAJCOM and item manager.

6.17.1.4. Maintain a vacuum on all storage tanks IAW T.O. 37C2-8-1-116WC-*1 (Vacuum Limits).*

6.17.1.5. Checks tanks with a portable efficiency meter or vacuum gauge to ensure loss rates do not exceed the limits in T.O. 37C2-8-1-116WC-1.

6.17.1.5.1. Document vacuum/meter readings and date for all assigned tanks on the AFTO Form 95. Take appropriate action(s) to repair/replace tanks that develop a history of poor performance in maintaining a good vacuum.

6.17.1.6. Uses the portable dual efficiency meter readings or vacuum gauge readings to identify storage tanks requiring evacuation of annular space or additional annular space insulation.

6.17.1.6.1. Reports tanks that cannot efficiently store product to the MAJCOM.

6.17.1.6.2. Checks empty, serviceable containers to ensure they do not exceed vacuum limits in T.O. 37C2-8-1-116WC-1.

6.17.2. Servicing Cart Operation and Maintenance:

6.17.2.1. Using organizations maintain cryogenics servicing carts to include purging and pulling the vacuum.

6.17.2.2. Verify AFTO Form 244 to ensure carts meet safety or operating conditions.

6.17.2.3. FMT will not fill carts that do not meet safety or operating conditions.

6.17.3. Maintaining War Reserve Tanks. The FMT:

6.17.3.1. Verifies storage tanks held in war reserve status are completely serviceable.

6.17.3.2. Maintains an overboard vent system (OVS) for each 400-gallon cryogenic tank listed in the units DOC statement according to T.O. 37C2-8-1-127, *(Operations and Maintenance Instruction with Individual Parts Breakdown - Liquid Oxygen/Nitrogen Overboard Vent System).*

6.17.3.3. Stores the OVS in a locked box or footlocker, and inventories annually.

6.17.4. Preparing Air Transportable Cryogenic Storage Tanks for Shipment. The cryogenic production supervisor:

6.17.4.1. Affixes an approved static grounding reel on the 400-gallon air transportable liquid oxygen tanks.

6.17.4.2. Consults T.O. 37C2-8-1-127 for instruction on the overboard vent system, when 400 gallon cryogenic storage tanks are loaded on aircraft for deployment.

6.17.5. Painting and Marking Cryogenics Storage Containers. The cryogenic production supervisor:

6.17.5.1. Paints, marks and maintains corrosion control on containers IAW T.O. 35-1-3, *Corrosion Prevention, Painting and Marking of USAF Support Equipment*, and Air Force Drawing 754532.

6.17.5.2. Centers decals and position time compliance T.O. markings according to applicable publications.

6.17.5.3. Requisitions decals IAW applicable standards. Locate decal part numbers in the applicable storage container -4 T.O. illustrated parts breakdown (IPB).

6.17.6. Operating cryogenic semi-trailers. The cryogenic storage supervisor:

6.17.6.1. Operates vehicles over public roadways with two or more personnel, of which one will be fully qualified in handling cryogenic products.

6.17.6.2. Ensures the vehicle complies with Interstate Commerce Commission and Federal/State Department of Transportation requirements.

6.18. Reducing Cryogenic Losses. The cryogenic production supervisor:

6.18.1. Limits the fill periods to the minimum number required to effectively support mission requirements by coordinating a cart-filling schedule with using organizations.

6.18.2. Fills only those carts actually required for aircraft servicing. Encourage using organizations to keep active carts to a minimum, and maintain other carts in a purged, standby status.

6.18.3. Keeps active tanks as full as economically possible.

6.19. Performing Quality Control. Cryogenics operators accomplish required on-line product tests and record results on production forms prescribed by the applicable plant T.O.s.

6.19.1. Coordinate with Lab personnel to include tests/results in FAS.

6.20. Obtaining Supply Support.

6.20.1. The FMT initiates requisitions for plants or tanks on AF Form 601, **Equipment Action Request**, according to AFMAN 23-110.

Chapter 7

IMPLEMENTING THE FUELS INFORMATION SERVICE CENTER

Section 7A—The Fuels Information Service Center (FISC)

7.1. Establishing the Fuels Information Service Center (FISC). The FISC is charged with daily management of fuels resources, providing support, accounting, and laboratory analysis of fuel and cryogenic products. The FMT will:

7.1.1. Staff Resource Control Center (RCC) with a minimum of two personnel with the 040 SEI.

7.1.1. **(ANG)** Each ANG flight will have a minimum of one individual assigned with the 040 SEI.

7.1.2. Staff the fuels laboratory with a minimum of one graduate of the Fuels Quality Control Course.

7.1.2. **(ANG)** Each ANG flight will have a minimum of one individual assigned with the 039 SEI.

7.1.3. In conjunction with the Fuels Training Supervisor, recommend award of 039 and 040 SEIs based on the prerequisites listed in AFMAN 36-2108.

7.1.4. Provide at least 30 days lab, RCC or inventory reconciliation familiarization training prior to attending the fuels quality control, DESC FAS and Inventory Accounting courses.

7.2. Duties of the Fuels Information Service Center (FISC) Superintendent.

7.2.1. Reports directly to the Fuels Manager/Superintendent.

7.2.2. Supervises the Resource Control Center (RCC), Fuels Support, and Fuels Laboratory functions.

7.2.2.1. Reviews aircraft flying schedules and coordinates with the operations superintendent to ensure all mission requirements are met.

7.2.2.2. Ensures resource controllers are familiar with Defense Working Capital Fund (DWCF) principles and procedures set forth in DoD 4140.25M, *DoD Management of Bulk Petroleum Products, Natural Gas, and Coal*, and AFMAN 23-110, *USAF Supply Manual*.

7.2.3. Ensures all fuels support functions are accomplished.

7.2.4. Ensures fuels laboratory technicians do not perform laboratory tests, work with chemicals, or use laboratory equipment unsupervised until they have received “hands-on” training and are certified on the associated tasks.

7.2.5. Reviews laboratory reports to ensure fuel meets quality standards and to identify significant trend patterns.

7.2.5.1. Recommends changes to improve product quality.

7.2.5.2. Assists fuels supervisors to improve procedures.

7.2.6. Maintain minimum RCC facility standards.

7.2.6.1. If RCC has a classified computer system, coordinate with local security agencies for specific security requirements.

7.2.6.2. Designate backup facility (pump house, bulk storage, or other suitable facility) as an alternate RCC. Equip the alternate RCC with the means to track fuel facility and equipment status.

7.2.6.3. Equip both primary and alternate locations with an emergency power source.

Section 7B—Resource Control Center (RCC)

7.3. Duties of the NCOIC RCC.

7.3.1. Monitors fuels operations and maintains fuels accounts according to applicable directives. Use the Fuels Automated System (FAS) to collect, store, monitor, and process:

7.3.1.1. All fuel servicing and accounting transactions.

7.3.1.2. Product inventory management.

7.3.1.3. Vehicle and equipment status.

7.3.1.4. List of key personnel including element and home telephone.

7.3.1.5. Submit data to the Fuels Automated System (FAS) Enterprise Server (FES) according to DESC processing guidance.

7.3.1.6. Reconcile with the FES and clear rejects on a daily basis.

7.3.1.7. Maintain a document control function for fuels documents and transactions processed in accordance with AFPD 37-1, *Information Management* and AFMAN 37-123, *Management of Records* and disposed of in accordance with the RDS located at **https://webrims.amc.af.mil**.

7.3.1.8. Provide the current inventory status of all products and other pertinent information on receipts, storage, and issue transactions and ensures stock availability to POS and PWRS.

7.3.2. Maintains a backup copy of the FAS system. This function may be performed by the Fuels Administrative Supervisor/workgroup manager.

7.3.3. Maintains one Uninterruptible Power Source (UPS) for the FAS database server.

7.3.4. Coordinates with using organizations for requirements forecasting.

7.3.5. Display flightline layout showing all servicing locations.

7.3.6. Monitor aircraft generation status. Display aircraft generation status when required by unit mission.

7.3.7. Act as the single point of contact for the flight during other than normal duty hours.

7.3.7. **(ANG)** Maintenance Operations Control Center or Base Operations will contact the Fuels Superintendent or Fuels Recall List when the RCC is not manned or during other than normal duty hours.

7.3.8. Establish procedures to ensure transfer of pertinent information to each shift controller, Operations Superintendent, FISC Superintendent, FMT, and supporting agencies.

7.3.8. **(ANG)** Not applicable to ANG units running a single shift. Units running multiple shifts must adhere to this requirement.

7.3.9. Inform FISC Superintendent, Liquid Fuels Maintenance (LFM) and/or Refueling Maintenance (RFM) when in-commission status for facilities or mobile equipment reaches the minimum level.

7.3.10. Maintain the number and locations of emergency power generators. List the fuels personnel certified to operate these generators.

7.3.11. Effectively communicate using radios and telephones. Radios are primary means of communication between the RCC and fuels operating activities. The RCC requires immediate contact with the Maintenance Operations Control Center (MOCC) and positive control over all fuels facilities and flight line operations. Equip the RCC with at least three telephone lines:

7.3.11. **(ANG)** Communicate using radios and telephones. Radios are primary means of communication between the RCC and fuels operating activities. ANG units must have a Fuels Radio net. A secondary crash net is recommended, however, it is not mandatory. The RCC requires immediate contact with the MOCC and positive control over all fuels facilities and flight line operations. ANG units shall equip the RCC with at least two telephone lines to include a direct line to the MOCC.

7.3.11.1. A “Class A” line.

7.3.11.2. A “Class C” line.

7.3.11.3. A direct line to MOCC.

7.3.11.4. Recommend the RCC be provided with a secondary crash net for emergency notifications.

7.4. Preparing for Disasters.

7.4.1. The NCOIC RCC equips the RCC with:

7.4.1.1. A standard base grid map with all fuel facilities marked or highlighted for easy identification.

7.4.1.2. A fuels alert recall roster.

7.4.1.3. Disaster/emergency checklists or operating instructions.

7.4.1.4. An alternate parking plan to relocate fueling equipment.

7.4.2. In event of an emergency, the resource controller:

7.4.2.1. Notifies each element in the fuels management flight, the squadron commander and Wing Command Post of disaster or other emergency incidents.

7.4.2.2. Records actions taken and personnel notified.

7.5. Issuing Servicing Clipboard.

7.5.1. The resource controller issues servicing clipboards containing the following forms or automated equivalent, if applicable:

7.5.1.1. AFTO Form 422, **Differential Pressure Log**.

7.5.1.2. AF Form 1232, **Bulk Fuel Issue/Defuel Summary**.

7.5.1.3. DD Form 1898, **Fuel Sale Slip**.

7.5.2. At time of dispatch provides the fuels operator with:

7.5.2.1. Grade of fuel.

7.5.2.2. Refueling vehicle/equipment registration number.

7.5.2.3. Authorized delivery point (aircraft type and serial number or facility number).

7.5.2.4. Reason and estimated quantity of defuel.

7.5.2.5. An applicable fuel servicing checklist.

7.5.3. Marking Clipboards.

7.5.3.1. Mark the clipboard front to indicate product and vehicle/equipment registration number.

7.5.3.2. Color-code clipboards when handling more than one grade of aviation or ground fuel, (i.e., a base handling JP-8, MUR and DL2, is not required to color code their aviation fuel clipboards, but is required to color code their ground products clipboards). Use the color scheme in **Attachment 9**.

7.6. Notifying of Weather Warnings. At bases without automatic weather warning equipment, the NCOIC RCC formalizes a written agreement with the installation weather detachment, MOCC and base operations to receive weather warnings. The NCOIC RCC or controller:

7.6.1. Notifies all fuels personnel of the weather warning.

7.6.2. Records all pertinent information such as thunderstorms, lightning, strong surface winds, heavy rains, and freezing precipitation.

7.6.3. Terminates fuel operations, to include commercial cryogenics receipts and issues performed outdoors, and bare base cryogenic plant operations when:

7.6.3.1. Lightning is within 5 miles.

7.6.3.2. Other potentially hazardous conditions exists as determined by the base weather officer.

7.6.4. The following operations may continue:

7.6.4.1. Cryogenic production operations (product being introduced into base storage tanks/cylinders from the plant).

7.6.4.2. Issues from the base service station.

7.6.4.3. Commercial and DoD pipeline receipts.

7.6.4.4. Vehicle movements (including refuelers).

7.6.4.5. Pipeline transfer operations (including bulk storage to hydrant tanks).

7.6.5. The RCC controller informs all elements to resume operations and annotates the weather warning termination time.

7.7. Controlling Keys.

7.7.1. The RCC will keep a spare key for all locks used to secure fuels equipment, facilities, and refueler ignitions. Keys and locks used as part of the flight's lockout/tagout program and/or used to isolate equipment components for quality control will be maintained by the base fuels laboratory.

7.7.2. Periodically check all spare keys for operation and correct identification. Document this inspection and report the following data to Fuels Compliance, Flight Security Manager and the FMT: number of keys checked, personnel performing inspection, discrepancies and corrective actions.

7.7.3. When a key is lost, requiring the spare to be permanently issued, replace the spare key or re-cylinder the lock.

7.7.4. Keep keys in ignition of fueling units and tractors for fuel or propellant transporters at all times.

7.8. Selling Aviation Products to Contract, Charter and Civil Aircraft. DESC Cash Sale instructions outlines guidance for cash sales of Defense Logistics Agency (DLA) owned product. The FMT:

7.8. (ANG) Selling Aviation Products to Contract, Charter and Civil Aircraft. Not applicable to ANG.

7.8.1. Appoints personnel in writing authorized to collect cash obtained from these sales IAW DoD-FMR 700.14-R, Volume 5, *Disbursing Policies and Procedures*.

7.8.2. Provides for the safekeeping of cash according to AFI 31-101, *The Air Force Installation Security Program*.

NOTE: Off-duty personnel cannot safeguard money collected for cash sales of aviation products.

7.9. Accounting for Special and Missile Fuels.

7.9.1. Accounting for special fuels. The Defense Energy Support Center establishes procedures and processing for the handling of special fuels.

7.9.2. Accounting for missile fuels. The NCOIC RCC:

7.9.2.1. Accounts for propellants, oxidizers, pressurants, and related items according to AFMAN 23-110, Vol 1, Part Three, Chapter 4 (until incorporated into DoD 4140.25M).

7.10. Accounting for Liquid Oxygen and Liquid Nitrogen. The RCC accounts for liquid oxygen and liquid nitrogen according to AFMAN 23-110.

7.10.1. The preferred method of procuring cryogenic products is the Government Wide Purchase Card.

Section 7C—Fuels Support

7.11. Establishing the Fuels Support Function. The FMT:

7.11.1. Establishes a formal rotational training plan to maintain a balance of skills within the flight.

7.12. Duties of the Flight Mobility Supervisor.

7.12.1. Evaluates and reports the overall fuels flight mobility status to FMT.

7.12.2. Monitors mobility personnel compliance in maintaining updated documents, individual mobility equipment, and immunizations.

7.12.3. Schedules personnel requiring special qualifications training.

7.12.4. Ensures assigned UTCs meet requirements in **Attachment 14**.

7.12.5. Selects personnel with at least two years retainability to attend ATHRS, ABFDS, and FARP schools.

7.12.6. Maintains a current listing of all SEIs, flight physicals, physiological training, and any other unique training requirements on FARP personnel.

7.12.7. Schedule flight physicals and physiological training at least 45 days before due date.

7.12.8. In conjunction with the Fuels Training supervisor, ensures the appropriate special experience identifier (SEI) is awarded IAW AFMAN 36-2108.

7.12.9. Maintain AF Form 702, **Individual Physiological Training Record**, and AF Form 1042, **Medical Recommendation for Flying or Special Operational Duty**, for ABFDS qualified personnel.

7.12.10. Identifies fiscal year mobility support funding requirements to the squadron commander's resource manager in support of unit SEI DOC taskings and equipment requirements.

7.12.11. Prepares and processes equipment for deployment.

7.12.12. Coordinates with local agencies to meet MAJCOM deployment time frames.

7.12.13. Must be familiar with unit DOC taskings, UTC posturing and coding procedures, and status of all flight UTCs in the AEF Reporting Tool (ART).

7.13. Duties of the Fuels Training Supervisor.

7.13.1. Administer the upgrade training program according to AFI 36-2201, *Developing, Managing, and Conducting Training*.

7.13.2. Designates qualified personnel as trainers.

7.13.3. Develops training programs for all assigned equipment and systems.

7.13.4. Coordinates the Fuels Management training program with squadron training.

7.13.5. Maintains Weighted Airman Promotion System (WAPS) study materiel.

7.13.5. **(ANG)** Not applicable to the ANG.

7.13.6. Schedules generator operation, driver's training, and fire extinguisher training.

7.13.7. Maintains personnel qualifications and ancillary training in FAS.

7.13.8. Ensures the appropriate SEI is awarded to personnel IAW AFMAN 36-2108.

7.13.9. Establishes a tank custodian training program IAW AFI 23-204, *Organizational Fuel Tanks*.

7.13.10. Reviewing Training Documentation. Review all training records semiannually.

7.13.11. Fire Prevention Training. Develop a lesson plan to include:

7.13.11.1. Fire reporting procedures.

7.13.11.2. Facility evacuation and vehicle evacuation from fuel servicing areas.

7.13.11.3. Fuel spill response.

7.13.11.4. Emergency shutdown procedures.

7.13.11.5. Hazard elimination.

7.13.12. Chemical Warfare Defense Equipment (CWDE) Training. Schedule CWDE training with the Civil Engineer Readiness Flight annually and document on individual AF Form 1098, **Special Task Certification and Recurring Training**, FAS, or automated forms.

7.13.12.1. Train all deployable personnel.

7.13.12.2. Train personnel to perform assigned tasks in MOPP 4 gear based on the requirements in the mission capability statement of their assigned UTC. This is called Task Qualification Training (TQT)

7.13.12.3. During TQT the individual will wear the full chemical warfare ensemble while driving/operating fueling vehicles and performing duties associated with the UTC they are filling. Some simulation may be required for certain tasks. Discuss all known hazards associated with working in MOPP 4 gear before performing required tasks. During the training scenario, the trainee must be under the direct supervision of a certified trainer.

NOTE: Task Qualification Training (TQT) must be accomplished prior to personnel operating vehicles in MOPP4 unsupervised. (After initial TQT, refresher training is required annually).

7.13.13. Developing a Rotational Training Program.

7.13.13.1. In coordination with the FMT, implements a base-level rotational training program IAW core tasks identified in the Career Field Education and Training Plan (CFETP).

7.13.13.2. A formal rotational program is not required if the location has fewer than 15 military personnel and those with 12 to 15 month tour lengths.

7.13.13.2. **(ANG)** A formal rotational training program is not required but rotating personnel to acquire core task training is highly recommended.

7.13.13.3. Use the following guidelines and the CFETP as a template:

7.13.13.3.1. 5-Skill Level: Experience in mobile distribution, bulk storage, service station, and laboratory functions.

7.13.13.3.2. 7-Skill Level: Familiar with the areas necessary for the 5-Skill Level plus hydrant distribution, preventive maintenance, RCC, and cryogenics.

7.13.14. Publication Familiarization. Fuels supervisors must familiarize personnel with applicable publications and advice personnel of significant changes.

7.14. Duties of the Fuels Materiel Control Supervisor.

7.14.1. Coordinates supply and equipment transactions with base supply.

7.14.2. Buys needed parts, tools, and equipment.

7.14.3. Establishes bench stock and special level authorizations, if required.

7.14.4. Monitors equipment authorizations and custodian receipt listings.

7.14.5. Provides supply and equipment budget forecasts through the FMT to the squadron commander.

7.14.6. Manages the Government Purchase Card Program for the flight IAW AFI 64-117, *Air Force Government Wide Purchase Card Program*.

Section 7D—Base Fuels Laboratory

7.15. Establishing a Fuels Laboratory Function.

7.15.1. The FMT:

7.15.1.1. Establishes a base fuels laboratory function to evaluate the cleanliness of fuel and fuel-handling systems, for each base handling aviation fuel.

NOTE: The area fuels laboratory conducts full specification tests to determine chemical and physical properties of a product.

7.15.1.2. Use AFH 32-1084, *Facility Requirements*, and AFOSH 91-38, *Hydrocarbon Fuels - General*, to identify laboratory facility criteria.

7.15.1.2. **(ANG)** Also reference ANG Handbook 32-1084.

7.15.1.3. Equips the laboratory to perform the tests specified by 42-Series Technical Orders for all products handled. Refer to AS460 for fuels laboratory equipment.

7.15.1.4. **(Added-ANG)** Every effort must be made to ensure that the fuels flight has a fuels laboratory to perform fuel testing IAW TO 42-B series. Units that do not have a lab should initiate a Memorandum of Agreement (MOA) with the host fuels flight to allow ANG personnel with the 039 SEI to perform normal laboratory technician duties to maintain proficiency.

7.15.2. MAJCOMs approve variances to laboratory facility criteria with coordination from the Air Force Safety Center, Ground Safety (HQ AFSC/SEG), and MAJCOM Safety offices.

7.15.3. The AFPET approves fuel analyses performed anywhere other than a qualified base laboratory facility.

7.16. Duties of the NCOIC Fuels Laboratory.

7.16.1. Documents all fuel/cryogenic sampling and sample due dates in the FAS.

7.16.1.1. Uses the AFTO Form 150, **Base Fuels Sampling and Testing Record**, at deployed locations if automation in unavailable.

7.16.2. Administers the Caution Tag Program.

7.17. Caution Tag Program. The NCOIC Fuels Laboratory:

7.17.1. Notifies the RCC when an AF Form 980, **Caution Tag**, is placed or removed.

7.17.2. Ensures caution tags are recorded in FAS.

7.17.3. Maintains backup data.

7.17.4. Uses an AF Form 980 on refueling equipment and facilities that are overdue laboratory sampling.

7.18. Establishing Sampling and Testing Requirements.

7.18.1. Establish sampling requirements and a laboratory correlation program IAW T.O. 42B-1-1, *Quality Control of Fuels and Lubricants*.

7.18.2. Qualified personnel not assigned to the fuels laboratory may draw and analyze fuel samples when approved by the FMT.

7.18.3. Enter all test sets and results into FAS, including cryogenic samples (odor samples, etc.). Visual fuel samples from vehicles/equipment and installed facilities may be recorded at the discretion of the FMTfor trend analysis of water accumulation/removal from fuel systems.

7.19. Handling Contaminated and Off-Specification Fuel Products.

7.19.1. Laboratory Personnel:

7.19.1.1. Immediately notify the FMT and RCC of any suspected contaminated or off-specification fuel.

7.19.1.2. Immediately remove fuel stocks, equipment, and facilities from service by utilizing a caution tag and a lock to prevent use.

7.19.1.3. Analyze samples to determine the problem and its cause.

7.19.2. The FMT:

7.19.2.1. Informs the squadron commander, affected agencies, and agencies listed in T.O. 42B-1-1.

7.19.2.2. Immediately notifies MAJCOM (via telephone within 2 hours of the incident) and follow up message or electronic message within 24 hours of occurrence with an info copy to AFPET.

7.19.2.3. MAJCOM notifies the applicable DEO/DER Quality Section and the assigned Quality Surveillance Representative.

7.20. Crashed Aircraft Fuel Samples.

7.20.1. Lab personnel pull all fuel samples associated with aircraft incidents and submit samples IAW T.O. 42B-1-1.

7.20.2. Crash Sampling Kit. The Lab personnel:

7.20.2.1. Refer to T.O. 42B-1-1 for the mandatory kit items.

7.20.2.2. Inventory and inspect the kit for cleanliness and serviceability annually, then seal it to prevent removal of equipment.

7.20.2.2.1. Document this inspection in FAS.

7.20.2.3. Perform a semiannual check to ensure the seal is intact.

7.20.2.3.1. Document this inspection in FAS.

7.20.2.3.2. Re-inspect the kit if there is any evidence of tampering.

Chapter 8

COMPLIANCE & ENVIRONMENTAL

Section 8A—The Compliance Function

8.1. Duties of the Compliance & Environmental Superintendent. The Compliance & Environmental Superintendent manages the inspection function and the environmental program.

8.1.1. The FMT will have one person dedicated to performing compliance functions.

8.1.2. The FMT will have one person dedicated to performing environmental compliance functions.

8.1.3. The Compliance Superintendent/Supervisor will:

8.1.3.1. Establish a safety program according to AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Prevention, and Health (AFOSH) Program*, and AFOSH Standards.

8.1.3.2. Provide supervisors topics to present at daily safety briefings.

8.1.3.3. Attend safety briefings on a random basis to check for effectiveness.

8.1.3.4. Brief all fuels personnel at least quarterly on safety matters. This briefing includes hazards, safety precautions, first-aid measures and off-duty seasonal hazards and precautions. Briefing should also include high visibility items such as safe handling of fuel soaked clothes, prenatal precautions and wear of contact lenses.

8.1.3.4. **(ANG)** Element supervisors are present in ANG fuels sections only during UTA. The Fuels Safety Monitor or designated representative will conduct a safety briefing during each UTA. Topics will include, but are not limited to: mishaps, accidents, regulations/technical order updates, and any safety hazards that have occurred since the previous UTA. This briefing will be recorded in a log, signed by all personnel within the fuels flight, and maintained for a minimum of six months.

8.1.3.5. Inspect the fuels management activity occupational safety and health program semiannually using an AF Form 2420, **Quality Assurance Inspection Summary**, or automated equivalent. Semiannual inspections may be combined with internal evaluations.

8.1.3.6. Establish an effective hazard reporting system according to AFI 91-204, *Safety Investigations and Reports*.

8.1.4. The Fuels Environmental Superintendent/Supervisor will:

8.1.4.1. Provide weekly environmental topics to flight supervisors for inclusion into safety briefings.

8.1.4.2. Assure compliance with federal, state, and local environmental laws and regulations, and Air Force Policy Directives and Instructions. At overseas locations, assure compliance with Final Governing Standards (FGS) or the Overseas Environmental Baseline Guidance Document (OEBGD) in the absence of the FGS.

8.1.4.3. Consult with the installation Environmental Protection Committee, Base Environmental Manager, Base Civil Engineer (BCE), Base Bioenvironmental Engineer, and Staff Judge Advocate to stay current of local environmental rules, restrictions, and regulations.

8.1.4.4. Obtain funding for recurring environmental expenses IAW DoD 4140.25M.

8.1.4.4.1. Coordinate with the installation environmental office to identify and determine annual recurring expenses eligible for environmental funding.

8.1.4.4.2. Coordinate with installation environmental office to determine environmental compliance actions and projects upon DESC's annual request for action.

8.1.4.4.3. Be aware of emergency funding reimbursement procedures for spill cleanup actions IAW DoD 4140.25M, Chapter 8, *Management of Storage and Distribution Facilities*.

Section 8B—Evaluations

8.2. Evaluation Guidelines. The Compliance & Environmental Superintendent may refer to the inspection checklist in AFMAN 23-110, *USAF Supply Manual*, Vol 1, Part One, Chapter One, Section 1C, Attachment 1C-14, *Checklist--Fuels Management Officer*. This checklist may be supplemented by MAJCOMs/Units for local conditions to evaluate the following:

8.2.1. Management effectiveness.

8.2.2. Administrative/LAN procedures.

8.2.3. FISC accounting procedures.

8.2.4. Operator performance.

8.2.5. Ground safety and fire prevention.

8.2.6. Environmental compliance.

8.2.7. Corrosion control.

8.2.8. Care of equipment and facilities.

8.2.9. Training.

8.2.10. Procedures for product quality.

8.3. Performing Semiannual Evaluations.

8.3.1. The Compliance & Environmental Superintendent will:

8.3.1.1. Evaluate each element, except its own function, at least once each six months.

8.3.1.1. **(ANG)** Evaluate each element, except its own function, at least annually. Maintain annual compliance inspection reports for a minimum of one year or until after the next inspection, whichever is longer.

8.3.1.2. Revisit after 30 but within 45 days to check each discrepancy found during the semiannual evaluation.

8.3.2. Advise the section supervisor of the areas to be evaluated, special items of concern, and discrepancies from the last assessment.

8.3.3. The FMT designates an evaluator to perform a semiannual assessment of the Compliance & Environmental element.

8.4. Conducting Spot Checks. The evaluator will:

8.4.1. Perform at least 10 no-notice spot checks each week. At bases with less than 20 full-time fuels personnel perform at least two no-notice spot checks per week.

8.4.1. **(ANG)** Perform a minimum of four spot checks per month. Two of which will be conducted on scheduled UTAs. Element supervisors may accomplish spot checks.

8.4.2. Spot-check all shifts including weekends. If spot check is rated unsatisfactory it will not be consolidated with others. Instead it will be routed separately, identifying the failure and circumstances involved. Immediately route through the responsible supervisor to the FMT.

8.4.3. Conduct spot checks during exercises and contingencies.

8.4.4. Stop the operation and notify the immediate supervisor and the FMT if a major safety violation is found, such as:

8.4.4.1. Discovering an unsafe or hazardous facility/vehicle/equipment that has not been identified, withdrawn from use, or properly danger/caution tagged.

8.4.4.2. A person committing a safety violation that could reasonably be expected to result in injury to personnel or damage to aircraft, equipment, or facilities.

8.4.5. Results from stop checks will be annotated on AF Form 2419, or electronic equivalent and routed through the supervisor to the FMT.

8.4.6. Discuss positive and negative findings, to include root causes and corrective actions.

8.4.7. Identifies recurring discrepancies within a particular element or across the entire flight (negative trends) to the FMT for correction.

8.5. Evaluation Assessment Criteria. Rate all evaluations (semi-annual and spot checks) as either "Satisfactory" or "Unsatisfactory". NOTE: The 5 tier rating system may be used at the discretion of the FMT.

8.5.1. **(Added-ANG)** ANG will use the following assessment criteria:

8.5.1.1. **(Added-ANG)** An internal evaluation will be rated as "satisfactory" if the evaluated area, facility, vehicle, equipment, or personnel meet or exceed the requirements of Air Force Publications, Code of Federal Regulation, or Technical Guidance.

8.5.1.2. **(Added-ANG)** An "unsatisfactory" rating will be given when the area, facility, vehicle, equipment or personnel actions do not meet the minimum standards in Air Force Publications, Code of Federal Regulation, or Technical Guidance.

8.5.1.3. **(Added-ANG)** Major safety violations will be given an "unsatisfactory" rating.

8.6. Preparing and Routing the Report.

8.6.1. The Compliance & Environmental Superintendent will:

8.6.1.1. Prepare and route the AF Form 2419 **Routing and Review of Quality Control Reports** and/or AF Form 2420, **Quality Assurance Inspection Summary**, or computer product to the applicable element supervisor and chain of command to include the squadron commander.

8.6.1.2. Carry forward open items to the next report.

8.6.2. The element supervisor will:

8.6.2.1. Reply to each discrepancy stating the cause and corrective action taken to prevent recurrence.

8.6.2.2. Provide action plan, annotate the word "OPEN", and the anticipated completion date on all items that cannot be immediately corrected.

8.6.3. Each reviewer verifies the corrective actions.

8.6.4. If the evaluator observes a discrepancy for which an outside agency is responsible, the FMT informs the agency and routes the report through the squadron commander to the chief of the agency.

Section 8C—Environmental Guidelines

8.7. Spill Prevention and Containment. The FMT:

8.7.1. Ensures all FMT fuel tanks are equipped with high-level alarms and/or automatic high-level shut-off valves. These alarms are in addition to the Fuels Manager alarms.

8.7.2. Coordinates with BCE to establish safe fill levels for all storage tanks.

8.7.3. Provides secondary containment that is impermeable to petroleum products at all primary loading and unloading facilities and for all above ground tanks larger than 660 gallons.

8.7.4. Establishes procedures to prevent unauthorized discharge of water containing residual petroleum products or hazardous chemicals that have leached out of the petroleum product.

8.7.5. Coordinates with the base environmental coordinator/manager to sample and properly dispose of fuel tank dike drainage and tank bottom water.

8.7.6. Coordinates with the Civil Engineer Operations Flight to establish local procedures for the proper operation, inspection, and maintenance of oil/water separators.

8.7.7. Develops local operating procedures for collection, segregation, storage, and disposition of waste and reusable bulk petroleum products according to AFI 23-502, *Recoverable and Unusable Liquid Petroleum Products*.

8.7.8. Ensures fuels personnel understand responsibilities as outlined in the base Spill Prevention Control and Countermeasures (SPCC) Plan, and the base's hazardous materiel emergency planning and response plan (HAZMAT plan) which addresses federal, state, and local spill prevention and response requirements.

8.7.9. Notifies the base environmental manager of any changes in fuels operations that may require an amendment to the HAZMAT plan.

8.7.10. Ensures adequate spill prevention and clean-up materiel are readily available.

8.8. Waste Management. The FMT:

8.8.1. Contacts base environmental flight to get disposal instructions for off-specification product or fuel/water mixtures.

8.8.2. Does not use installed hydrants, storage sumps, and slop tanks to collect or store waste fuels.

8.8.3. Obtains written MAJCOM approval to use stock listed vehicles and trailers for the collection and transport of waste fuels or oils. Before returning vehicles to normal service, ensure they meet compliance requirements outlined in T.O. 42B-1-1.

8.8.4. Clearly marks and completely isolates the tanks and equipment used for waste products from active product storage and equipment to prevent contamination.

8.8.5. Properly train fuels personnel who handle hazardous waste.

8.9. Leak Detection. The FMT:

8.9.1. Assures that any chemicals or additives injected into USAF fuels are approved by the agencies listed in T.O. 42B-1-1.

8.9.2. Ensures fuels personnel are present for all inoculations of leak detection chemicals in FMT controlled storage tanks.

8.9.3. Maintain inoculation records IAW T.O. 42B-1-1.

8.9.4. Trains organizational tank custodians on their responsibilities outlined in T.O. 42B-1-1.

Chapter 9

FUELS MOBILITY SUPPORT

9.1. Duties of the Fuels Mobility Support Supervisor. At locations storing or using mobility support equipment (R14, R22, FFU15E, etc), the FMT establishes a Fuels Mobility Support Element. **NOTE**: Additional flight mobility monitor duties are in paragraph **7.12.**. The element supervisor:

9.1.1. Identifies fiscal year mobility support funding requirements to the squadron commander's resource manager.

9.1.2. Performs operator maintenance on mobility equipment.

9.1.3. Maintains technical orders and records for FMSE/FORCE.

9.1.4. Prepares and processes equipment, Mobility Readiness Spares Packages (MRSP) and JFDES kits for deployment.

9.1.5. Coordinates with transportation, supply, and personnel functions to meet MAJCOM deployment time frames. Transfer accountability of CA/CRL items to deployed supply account if deployment time period exceeds AFI 23-110 requirements.

9.1.6. Performs unit mobility monitor responsibilities in paragraph **7.12.**.

9.1.7. Maintains records of all FMSE/FORCE transactions (i.e. maintenance, inspection, salvage, and transfer of equipment).

9.2. Managing Fuels Mobility Support Equipment (FMSE/Fuels Operational Readiness Capability Equipment (FORCE).

9.2.1. MAJCOMs storing FMSE/FORCE:

9.2.1.1. Designate storage bases, prescribe command reporting, and administer a management program.

9.2.1.2. Calculate FMSE/FORCE personnel and equipment requirements to support current planning guidance. Maintain source documents until completion of the next validation.

9.2.1.3. Programs for fiscal year funding through appropriate agencies.

9.2.1.4. Develops procedures to obtain up-front money for reconstitution.

9.3. How to Store, Maintain, Inspect, and Deploy FMSE/FORCE and FARP Equipment.

9.3.1. All FMTs will:

9.3.1.1. Store all equipment inside where possible. In allocating inside storage, give priority to rubber products and filter-separator elements. Where inside space is not adequate, use outside covered storage. In both cases, provide dust covers for all openings in valves, hoses, nozzles, and equipment items.

9.3.1.2. Store bladders IAW T.O. 37A-1-101.

9.3.1.3. Store ABFDS bladders flat according to T.O. 37A9-3-7-1.

9.3.1.4. Store and maintain FARP equipment IAW T.O. 37A9-7-2-1.

9.3.1.5. Provide recurring inspection and maintenance on stored FARP assets. Equipment will be stored in a ready for deployment posture. Any deviation of equipment or down time will be reported to HQ AFSOC/LGRF, parent MAJCOM and AFPET.

9.3.2. MAJCOMs and FMTs provide recurring inspection and maintenance for all assigned equipment.

9.3.2.1. Use T.O. 37A-1-101, *USAF Fuel, Water and Lubricant Dispensing Equipment* for operation, servicing, and maintenance of air transportable fuel systems.

9.3.2.2. Use T.O. 37A9-7-2-1 for operating, servicing, and maintaining FARP equipment.

9.3.3. To prepare FMSE/FORCE or FARP equipment for deployment:

9.3.3.1. Inspect equipment.

9.3.3.2. Charge the batteries, run engines, visually inspect 10K and 50K bladders, and place bladders in slings/cradles or crates.

9.3.3.3. Inspect and leak check ABFDS bladders according to T.O. 37A9-3-7-1.

9.3.3.4. Inspect and prepare FARP equipment IAW T.O. 37A9-7-2-1.

9.3.3.5. Prepare the equipment for shipment IAW Air Force Interservice Manual AFMAN 24-204(I), (*Preparing Hazardous Materials for Military Air Shipments).*

9.3.3.6. Deploy equipment records IAW AFMAN 23-110, but be sure to keep a copy of the originals in case others are lost in shipment..

9.4. Setting Up FMSE/FORCE.

9.4.1. Use AFPAM 23-221, *(Fuels Logistics Planning)*, for executing fuel support operations particularly at other than main operating bases.

9.4.2. Locate and install FMSE/FORCE based on:

9.4.2.1. The airfield layout and type of aircraft supported.

9.4.2.2. The resupply source.

9.4.2.3. Aircraft taxi or tow capability.

9.4.2.4. The layout of roads and water channels.

9.4.2.5. Other facility limitations.

9.4.3. Use PMU-27 service station set-up to support ground fuels.

9.4.4. Site cryogenics facility to minimize the travel time and distance flight line servicing units move for refilling; provide accessibility for tank truck deliveries; and comply with distance criteria of AFMAN 91-201, *Explosives Safety Standards*.

9.5. Using FMSE/FORCE or FARP for Exercise Support.

9.5.1. For activities planning to use FMSE/FORCE for any reason other than OPLAN taskings, review the constraints of AFI 25-101, *War Reserve Materiel (WRM) Program Guidance and Procedures*, Chapter 6, Use of WRM.

9.5.2. Submit requests to parent MAJCOM Fuels Management Office.

9.5.3. Activities submitting requests must:

9.5.3.1. Provide 10 working days advance notice.

9.5.3.2. Provide purpose of intended use.

9.5.3.3. Use unit type codes (UTCs) to identify equipment and quantity when possible. UTCs may be tailored to suit the using organizations requirements.

9.5.3.4. Provide the in-place date at deployment location and length of loan.

9.5.3.5. Provide the full name, unit of assignment, and DSN phone number of the person(s) responsible for receiving, maintaining, and returning the equipment.

9.5.3.6. List fund cites for transportation, FMSE/FORCE reconstitution, and TDY of operator personnel IAW AFI 25-101, when requested.

9.5.3.7. Deploy equipment records IAW AFMAN 23-110, Vol II, Part 3, Chapter 1.

NOTE: Reconstitution will include the "up front" expense of associated MRSP, fuel bladders, batteries, and any other items that will require maintenance, repair, or replacement.

9.5.3.8. Forward special transportation information. Dedicated airlift is the preferred mode of transport.

9.5.3.9. Provide complete address of deployment location and on-site point of contact telephone numbers.

9.5.4. Using FARP:

9.5.4.1. For taskings of FARP personnel and/or equipment for exercises/contingencies which will require more than 24 continuous hours away from home station, submit notification of deployment to HQ AFSOC/LGRF within 24 hours of receipt of tasking.

9.6. Establishing ATHRS, ABFDS and FARP Operational and Training Requirements.

9.6.1. ABFDS and FARP operators:

9.6.1.1. Are qualified fuels specialists, AFSC 2F0X1, MSgt and below.

9.6.1.2. Must meet ASC9C flying duty qualification standards.

9.6.1.3. Are Classified as having an Aviation Service Code of 9C (Operations Support)

9.6.2. ABFDS and FARP operators must satisfactorily complete the following ancillary training courses:

9.6.2.1. 9C Flight Physical (Annually).

9.6.2.2. Physiological Training (Every 5 years).

9.6.2.3. Small Arms Training (9mm).

9.6.2.4. Chemical Warfare Training.

9.6.2.5. Fire Extinguisher Training.

9.6.2.6. Aircraft Ground Egress Training.

9.6.2.7. Night Vision Device Training

9.6.2.8. Intelligence Training (ISOPREP Card)

9.6.2.9. Life Support Equipment Training

9.6.2.10. Water Survival Training

9.6.2.11. Hazardous Cargo Training

9.6.2.12. Lox/Lin Servicing

9.6.2.13. ATHRS Training

9.6.2.14. Egress Procedures

NOTE: If formal training is not funded, ABFDS operators will be briefed by the aircrew prior to the flying mission on egress procedures.

9.6.3. The Logistics Readiness squadron commander, using AS 016, Part B, ensures ABFDS and FARP specialists received the personal equipment in **Attachment 8**.

9.6.4. The Base Hospital issues ABFDS/FARP operators prescription glasses according to AFI 44-117, *Ophthalmic Services*.

9.6.5. **Additional ABFDS Requirements.**

9.6.5.1. HQ USAF/XOOT allocates new and recurring man-year requirements to the MAJCOMs on a fiscal year basis and supplements them on a semi-annual basis (when requested).

9.6.5.2. MAJCOM Fuels Management Office will:

9.6.5.2.1. Forecast and submit annual ABFDS crew flying hour (man-year) requirements IAW AFI 11-402, chapter 8, Aviation and Parachutist Service, Aeronautical Ratings and Badges.

9.6.5.2.2. Submit flying hour request through their respective MAJCOM Flight Management office for validation.

9.6.5.2.3. Manage ABFDS from the command level.

9.6.5.2.4. Coordinate policy and procedures for ABFDS personnel support issues with AFPET.

9.6.5.2.5. The local Host Aviation Resource Manager's (HARM) office publishes aeronautical orders for ABFDS crews.

9.6.5.3. AFPET is the lead organization for all ABFDS personnel support issues (i.e. flying status, aeronautical orders, training, and life and medical support)

9.7. Additional FARP Requirements.

9.7.1. HQ AFSOC/LGRF will:

9.7.1.1. Certify the program and qualify the initial cadre including trainers of personnel at each new FARP location prior to their initial commitment date.

9.7.1.2. Establish and coordinate policy and procedures for FARP operations with AFPET.

9.7.2. Duties of the FMT:

9.7.2.1. Conducts initial interviews with all prospective FARP operators.

9.7.2.2. Ensures adequate personnel are designated and trained to meet 24-hour mission readiness requirements.

9.7.2.3. Ensures all FARP policies from AFSOC/LGRF are implemented.

9.7.2.4. Appoints all certifiers in writing.

9.7.2.5. Provides covered storage area for FARP servicing equipment and secured storage for FARP personnel equipment.

9.7.3. Duties of the FARP Team Chief:

9.7.3.1. Monitors FARP personnel and equipment to ensure all training is accomplished, qualifications are maintained, and readiness status meets mission operation requirements.

9.7.3.2. Briefs FARP personnel on all policies issues by HQ AFSOC/LGRF.

9.7.3.3. Provides management with a monthly status update.

9.7.3.4. Provides the RCC with a roster of primary and alternate team members on recall standby.

9.7.3.5. Coordinates with the flying squadron's planners/schedulers to ensure personnel availability for training and mission requirements.

9.7.3.6. Submits the FARP budget to HQ AFSOC/LGRF by 1 April each year.

9.7.3.7. Submits the FARP inventory to AFPET and HQ AFSOC/LGRF and the FARP training reports to HQ AFSOC/LGRF semiannually (1 April and 1 October).

9.7.3.8. Submit a mission sheet to HQ AFSOC/LGRF after every FARP mission or tasking (to include training) within two duty days after return to home station.

9.7.3.9. Ensure FARP operations are conducted as outlined in AFI 11-235, *Forward Area Refueling Point (FARP) Operations*.

9.7.3.10. Provide trip report to HQ AFSOC/LGRF after each FARP TDY or deployment.

9.7.3.11. Ensure each FARP program has a minimum of 20 serviceable hoses on hand at all times.

9.7.4. Currency requirements:

9.7.4.1. Perform one FARP mission every twelve months, from fixed wing aircraft to rotary wing aircraft with engines running, under blacked out conditions using Night Vision Goggles (NVGs).

9.7.5. Certifier Requirements:

9.7.5.1. Meet all requirements in **9.6.2.**. and be current, qualified, and appointed by the FMT in writing.

9.7.6. Forms Adopted: AF Form 847, Recommendation for Change of Publication, DD Form 1391, Military Construction Project Data, AFTO Form 22, Technical Manual (TM) Change Recommendation and Reply, DD Form 448, Military Interdepartmental Purchase Request, AFTO Form 781F, Aerospace Vehicle Flight Report and Maintenance Document, AF Form 3215, IT/NSS Requirements Document, AFTO Form 39, Fuel System Inspection and Discrepancy Report, AFTO Form 134, Aviator Breathing Oxygen Servicing Trailer Log (Liquid/Gaseous), AFTO Form 244, Industrial/ Support

Equipment Record, AFTO Form 95, Significant Historical Data, AF Form 601, Equipment Action Request, AFTO Form 422, Differential Pressure Log, AF Form 1232, Bulk Fuel Issue/Defuel Summary, DD Form 1898, Fuel Sale Slip, AF Form 702, Individual Physiological Training Record, AF Form 1042, Medical Recommendation for Flying or Special Operational Duty, AF 1098, Special Task Certification and Recurring Training, AFTO Form 150, Base Fuels Sampling and Testing Record, AF Form 980, CAUTION (Tag), AF Form 2420, Quality Control Inspection Summary, and AF Form 2419, Routing and Review of Quality Control Reports.

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

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T.O. 37A3-2, *Collapsible Containers*

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T.O. 37A7-2, *Powered Pumps*

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Abbreviations and Acronyms

ABFDS—Aerial Bulk Fuel Delivery System

ABO—Aviator's Breathing Oxygen

ACE—Alternate Capability Equipment for the ABFDS

ADC/FDS—Automated Data Collection/Fuel Dispensing System

ADDS—Aerial Delivery Dispensing System

ADPE—Automated Data Processing Equipment

AFLMA—Air Force Logistics Management Agency

AFOSH—Air Force Occupational Safety and Health Standards

AFPET—Air Force Petroleum Office

AFSC—United States Air Force Specialty Code

AFSS—Automated Fuel Service Station

AS—Allowance Standard

ASTM—American Society for Testing and Materials

ATHRS—Air Transportable Hydrant Refueling System

BCE—Base Civil Engineer

CFR—Code of Federal Regulations

CWDE—Chemical Warfare Defense Equipment

DEO—Defense Energy Office

DER—Defense Energy Region

DESC—Defense Energy Support Center

DOC—Design Operational Capability

DRMO—Defense Reutilization and Marketing Office

DRU—Direct Reporting Unit

DWCF—Defense Working Capital Fund

ECAMP—Environmental Compliance Assessment and Management Program

FAC—Functional Area Chief

FAM CART—Forward Area Manifold Cart

FARP—Forward Area Refueling Point

FAS—Fuels Automated System

FES—Fuels Automated System (FAS) Enterprise Server – “Purple Hub”

FISC—Fuels Information Service Center

FMFC—Fuels Management Flight Commander

FMSE—Fuels Mobility Support Equipment

FMT—Fuels Management Team

FOA—Field Operating Agency

FOD—Foreign Object Damage

FOI—Fuels Operating Instruction

FORCE—Fuels Operational Readiness Capability Equipment

HOSM—Host Operations System Manager

IMM—Integrated Materiel Manager

IMP—Inventory Management Plan.

IPRB—Installation Planning Review Board

JPO—Joint Petroleum Office

JQS—Job Qualification Standard

LAN—Local Area Network

LEAP—Logistics Education Advancement Program

LIN—Liquid Nitrogen

LOX—Liquid Oxygen

LPG—Liquefied Petroleum Gas

MAFSS—Mobile Automated Fuel Service Station

MEO—Most Efficient Organization

MHE—Materiel Handling Equipment

MILCON—Military Construction

MILSPEC—Military Specification

MIPR—Military Interdepartmental Purchase Request

MOCC—Maintenance Operations Control Center

MR&E—Maintenance, Repair and Environmental

MRSP—Mobility Readiness Spare Package

ORM—Operational Risk Management

OSHA—Occupational Safety and Health Act

OVS—Overboard Vent System

PEP—Professional Enhancement Program

PLMC—Petroleum Logistics Management Course

PMEL—Precision Measurement Equipment Laboratory

POL—Petroleum, Oils, and Lubricants

POS—Peacetime Operating Stock

PPE—Personal Protective Equipment

PSO—*See Peacetime Operating Stock*

PWRMR—Prepositioned War Reserve Materiel Requirement

PWRMS—Prepositioned War Reserve Materiel Stock

PWRR—Prepositioned War Reserve Requirement

PWRS—Prepositioned War Reserve Stock

QAE—Quality Assurance Evaluator

RCC—Resource Control Center

RDS—Air Force Records Disposition Schedule

RO—Responsible Officer

SAPO—Sub-Area Petroleum Office

SCAPE—Self-contained Atmospheric Protection Ensemble

SEI—Special Experience Identifier

SORTS—Status of Resources and Training System

TO—Technical Order

TPFDD—Time-Phased Force and Deployment Data

UGT—Upgrade Training

UMD—Unit Manning Document

UPMR—Unit Personnel Management Roster

UTC—Unit Type Code

WAA—Wartime Aircraft Activity

WCDO—War Consumable Distribution Objective

WMP—War and Mobilization Plan

WRM—War Reserve Materiel

Terms

Air Force Materiel Management Board (AFMMB)—Chaired by the Division Chief, Supply/Fuels Policy and Procedures and composed of the Supply Division Chiefs or the senior staff supply officer/ NCO of the major air commands. A governing body that meets to discuss long-range requirements of the Air Force supply system and formulates or approves proposed strategies for achieving long term goals.

Aerospace Fuels Laboratory—Provides testing services to bases on samples of petroleum and related products. Conducts specification tests to determine the quality of petroleum products under procurement and in the Air Force supply system.

Bulk Petroleum Products—Petroleum product delivered in volumes greater than 208 liters (55 U.S. gallons) such as tank trucks/cars, pipelines, coastal barges, and ocean tankers. This term can apply to several DESC purchase programs including the Bulk Fuels Program for military specification jet and

marine fuels, the Posts, Camps, and Stations commercial gasoline and diesels, and the Bunkers Fuel Program. Product is stored in tankage having a fill capacity greater than 208 liters (55 U.S. gallons).

Charter Carriers—Air carriers under agreement to any department of the US Government. This agreement may be an oral or written contract and the rates will equal those on file with the Civil Aeronautics Board. Charter carriers may or may not be under operational control of the department executing the agreement.

Civil Aircraft—All non-Government aircraft (domestic and foreign) other than contract and charter carrier aircraft.

Confined Space—A space that:

– Is large enough and configured so a worker can bodily enter and perform assigned work; and

– Has limited or restricted means for entry or exit (for example: tanks, vessels, silos, storage bins, hoppers, vaults, manholes, and pits are spaces that may have limited means of entry); and

– Is not designed for continuous human occupancy.

Contaminated Product—An off-specification product resulting from mixing with another product or products of different type and grade or by introduction of foreign matter such as rust, dirt, or water.

Contract Carriers—Air carriers under contract to any department of the US Government. They are under operational control of the department concerned at rates lower than published rates on file with the Civil Aeronautics Board.

Cryogenics—The science of refrigeration, with reference to methods for producing very low temperatures.

DESC Field Office—A subsidiary of a DESC region. (Example: DESC-United Kingdom is subordinate to DESC-Europe.) Responsibilities are often similar to those of the DESC region. It may perform transportation and traffic management functions such as oversight of transportation-related contracts, product slate reporting, and management of inland petroleum distribution/transportation. Primary function is to act as a liaison for a DESC region in support of contract administrative functions, inventory management, transportation and traffic management, and provide support to the Military Services and major commands. Selected DESC field offices may perform quality surveillance in support of DLA-owned fuel received, stored and shipped within their regional areas.

Defense Energy Support Center (DESC)—An organizational component of the Defense Logistics Agency (DLA). DESC is the integrated materiel manager/DoD central procurement agent for bulk petroleum, natural gas, coal and associated services. DESC owns and manages the bulk petroleum products in the Department of Defense to the point-of-sale (end user).

DESC Region—A management component of the Defense Energy Support Center (DESC) with a geographic area of responsibility to monitor DESC contracts for adequate customer support, control fuel deliveries, perform contract administration functions such as property administration and quality surveillance, provide/coordinate transportation support and emergency planning and report inventory/ supply transactions.

Defense Working Capital Fund (DWCF)—A DoD revolving funds that finances the buying and selling of goods and services. It also provides cost visibility and accountability to facilitate business operations.

DLA inventories are sold to end user organizational accounts (military units and federal agencies) that reimburse the DLA Division – DWCF for costs incurred.

Defueling—Types of defueling are:

Hot Defueling—Single point defueling of aircraft with one engine running.

Cold Defueling—Conventional defueling of aircraft which do not have an engine running.

Design Operational Capability (DOC) Statement—A summary of a unit's mission and resources for which it has been organized, designed and equipped.

Determinable Losses—The actual loss of inventory, the cause of which is determinable; such as contamination, fire, downgrading of products, etc.

FAS Enterprise Server (FES)—A web-based environment that collects, routes, and reports transactions among bases, contractors, DESC, Defense Finance and Accounting Service (DFAS) and other entities. *Also referred to as the "Purple Hub".*

Forward Area Refueling Point (FARP)—An operation used to hot refuel aircraft in areas where fuel is otherwise not available. Fuel is transferred from a source aircraft's (C-130, C-141, C17 or C-5) internal tanks to receiver aircraft while both aircraft's engines are running. Typically accomplished at remote locations under blackout conditions.

Fuels Automated System (FAS)—A vertically integrated automated information system consisting of base-level components and "enterprise" level systems providing visibility of bulk fuel assets and transactions to Services, Commander-in-Chiefs (CINCs), vendors, and DESC.

Functional Area Chief (FAC)—Government representative responsible for a functional area in which services are provided by a contractor. Exercise authority and responsibility for the function that will be under contract. Functional persons state the service that will be delivered, measure the quality of service, and accept the service.

Ground Products—Those refined petroleum products normally intended for use in administrative, combat, and tactical vehicles; materiel handling equipment; special purpose vehicles; and stationary power and heating equipment.

Hazardous Waste—Any petroleum product when mixed with a hazardous substance and designated as waste. Hazardous waste must be stored, transported, and disposed of in accordance with federal, state, local, or host nation environmental laws.

Hydrant System—An aircraft fuel servicing facility that can provide fuel through one or more outlets into an aircraft. The hydrant system generally consists of operating storage tanks (older hydrant systems normally have many 50,000 gallon tanks while newer systems normally have two 10,000 barrel tanks), pumps, filter-separators, pipelines, and dispensing.

Inventory Management Plan (IMP)—A DoD integrated plan of bulk fuel inventory levels and storage requirements designed to utilize DoD resources more efficiently and provide financial management data.

Logistics Force Packaging Subsystem (LOGFOR)—used to collect and store logistics detail for UTCs. It provides:

– Equipment planning data for use by Air Force units in their mobility plans.

– The foundation for individual UTC strategic airlift requirements estimates by operations planners at all levels.

– Air Force logistics input to the Type Unit Characteristics File (TUCHA).

Maintenance, Repair & Environmental (MR&E)—A single project at a military base that includes all construction materiel needed to produce a complete/usable facility or a complete and usable improvement to an existing facility with a total cost less than $750,000.

Military Construction (MILCON)—Any construction, alteration, development, conversion, or extension of any kind carried out with respect to a military installation.

MOGAS—Refers to all grades of automotive gasoline.

Organizational Fuel Tank—Any tank, other than integral vehicle tanks or hand-carried safety cans, not under exclusive fuels management control.

Peacetime Operating Stock (POS)—Inventory held at a location to sustain peacetime operations. It includes the unobtainables, safety levels, augmented levels, and economic resupply quantity.

Prepositioned War Reserve Requirement (PWRR)—That portion of the war reserve materiel requirement that the current Secretary of Defense guidance dictates be reserved and positioned at or near the point of planned use or issue to the user prior to hostilities to reduce reaction time and to assure timely support of a specific force or project until replenishment can be effected.

Prepositioned War Reserve Stocks (PWRS)—The assets that are designated to satisfy the pre-positioned war reserve materiel requirement.

Professional Enhancement Program (PEP)—Managerial development program designed to provide hands-on headquarters experience in fuels management for mid-level officers.

Quality Assurance Evaluator (QAE)—A person who represents the contracting officer in performing contractor evaluation functions.

Refueling—Types of refueling are:

Hot Refueling—Single point pressure refueling of aircraft with one or more engines idling.

Cold Refueling--Conventional refueling of aircraft which do not have an engine operating. (The term may be used to differentiate from hot refueling).

Responsible Officer (RO)—Appointed by the squadron commander. This person must be proficient in fuels management and is responsible for the care and safeguarding of the petroleum stocks. This person also ensures accountable records are maintained and required reports are generated.

Sample—A small part of a quantity of product representative of the enter quantity, used for inspection or to determine the quality of the product.

Timed-Phased Force and Deployment Data (TPFDD)—The Joint Operation Planning and Execution System (JOPES) database portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan, including:

- In-place units.

- Units to be deployed to support the operation plan with a priority indicating the desired sequence for - their arrival at the port of debarkation.

- Routing of forces to be deployed.
- Movement data associated with deploying forces.
  - Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces.
  - Estimate of transportation requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation resources.

Unit Manning Document (UMD)—A computer product which lists manpower authorizations. It reflects how many people are authorized to accomplish the mission. MAJCOMs use this document to show allocated resources, and as the baseline for portraying the impact of application of new or reapplication of existing manpower standards. The UMD contains:

- The position number
- AFSC.
- Functional account code (work center).
- Authorized grade.
- Number of authorizations.
- A summary of authorizations for officers, enlisted, and civilians assigned to each unit by work centers.

Unit Personnel Management Roster (UPMR)—a computer product which identifies people assigned to the unit, by section or functional account code (FAC). The UPMR identifies assignments and indicates the month and year of departures.

Unit Type Code (UTC)—Identifies a specific capability of personnel and/or equipment to be deployed in support of various operations.

Wartime Aircraft Activity (WAA) Report—provides planners with such information as sortie rates, sortie duration, gallons per sortie. Published as the War and Mobilization Plan (WMP), Volume 4.

War and Mobilization Plan (WMP)—The Air Force takes the Joint Strategic Capabilities Plan (JSCP), translates this into Air Force operational and logistics planning guidance, and publishes this in five volumes known collectively as the War and Mobilization Plan (WMP). The Wartime Aircraft Activity (WAA) listing is published as WMP, Volume 4. The WAA lists line entries for each JCS-approved OPLAN.

War Consumable Distribution Objective (WCDO)—document prepared by MAJCOMs to identify authorized quantities of war consumables to support Air Force wartime missions.

Attachment 1 (ANG)

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

ANGH 32-1084, *ANG Facility Requirements*.

TO 00-20-5, *Aerospace Vehicle/Equipment Inspection and Documentation*.

TO 36-1-191, *Technical and Managerial Reference for Motor Vehicle Maintenance*.

Abbreviations and Acronyms

AFT—Annual Field Training

ANG—Air National Guard

DESC-FI— Defense Energy Support Center-Facilities and Distribution Management Inventory Division

DoD— Department of Defense

FMAG— Fuels Management Advisory Group

IAW—In Accordance With

LRS— Logistics Readiness Squadron

MAJCOM—Major Command

MEP—Management Engineering Program

MOA— Memorandum of Agreement

UTA— Unit Training Assemblies

WGM—Workgroup Manager

Attachment 2

STANDARD FUELS RADIO TRANSMISSION CODES

Table A2.1. Radio Transmission Codes.

Code	Meaning
10-1	Receiving poorly.
10-2	Receiving well.
10-3	Radio Check.
10-4	Acknowledge, will comply.
10-5	Standby.
10-6	Repeat, reception poor.
10-7	Out of service location.
10-8	In service location.
10-9	What is location?
10-10	Return to RCC.
10-11	Departing parking area.
10-12	How many gallons out of unit?
10-13	Proceed to fill stand.
10-14	Entering fill stand area.
10-15	Leaving fill stand with full unit.
10-16	Request another unit-location.
10-17	Request supervisor at-location.
10-18	Request standby fire truck at location.
10-19	Fuel spill, request assistance.
10-20	Entering the parking area.
10-21	Unit requires maintenance (discrepancy).
10-22	Valves open; ready to receive.
10-23	Valves open; ready to start transfer.
10-24	Start pumping.
10-25	Stop pumping.
10-26	Pumps stopped.
10-27	Transfer complete; valves closed.
10-28	Servicing canceled.
10-31	Distinguished visitor in area.

Code	Meaning
10-36	Correct time.
10-97	Arrived at scene.
10-98	Finished with last assignment.

NOTE: Use the following modified 10-series radio transmission code list. Add other call signs to meet any local requirements.

Attachment 3

EDUCATION AND TRAINING OPPORTUNITIES

A3.1. Logistics Education Advancement Program (LEAP). LEAP is a career broadening education program designed to provide selected NCOs with on-the-job experience and training in special fuels logistics areas. The objective is to provide LEAP NCOs with a broader experience background. Each position is a 3-year assignment. Note: Those currently in the program and those who have been out of the program for 3 years or less are prohibited from voluntary cross training and are exempt from involuntary cross training programs. There are six LEAP positions which include:

A3.1.1. Two positions at the Pentagon, Washington D.C. Start at the Air Staff for 18 months and move to the Joint Staff to finish the tour. A new person will be hired every 18 months. Person must be E-7 or selectee.

A3.1.2. Two positions at Fort Belvoir, Virginia. Start in the Operations element of AFPET and move throughout the organization for 18 months and then move over to the Defense Energy Support Center to work in the Operations Center and each commodity business unit. A new person will be hired every 18 months.

A3.1.3. Two positions at Wright-Patterson AFB, Ohio. 18 months will be spent with the Air Force Tech Team and 18 months with the Air Force Research Laboratory. Two new personnel will be hired every three years.

A3.1.4. HQ USAF/ILGM chairs a LEAP selection panel composed of 2F000 personnel. The AFPC fuels (2F0X0) functional representative serves as an advisor.

A3.1.5. HQ USAF/ILGM tasks HQ AFPC/DPAAD1 to advertise the projected vacancy and solicit volunteers meeting the following mandatory prerequisites:

A3.1.5.1. Hold a grade of E6 or E7.

A3.1.5.2. Completed 8 - 14 years total active federal military service as of 1 October in the year considered for assignment.

A3.1.5.3. Possess a control 2F071 AFSC.

A3.1.5.4. Completed required PME.

A3.1.5.5. Have at least a "Secret" security clearance.

A3.1.5.6. Eligible for reassignment.

A3.1.6. Volunteers submit a package to their respective MAJCOM consisting of:

A3.1.6.1. A one-page nomination letter from the unit commander or equivalent.

A3.1.6.2. A copy of the last five Enlisted Performance Reports (EPR).

A3.1.6.3. A copy of the "Career Brief" obtained through the host Military Personnel Flight (MPF).

A3.1.6.4. A prioritized assignment preference list.

A3.1.7. MAJCOMs consolidate and forward nominee packages to HQ AFPC/DPAAD1, Randolph AFB, TX. The AFPC fuels representative verifies all prerequisite data and forwards nomination packages to HQ USAF/ILGM.

A3.2. Petroleum Logistics Management Course (PLMC).

A3.2.1. Sheppard Technical Training Center.

A3.2.1.1. Holds a formal fuels career broadening course, J3AZR2F091-002, for grades Master Sergeant through Chief Master Sergeant, LEAP selectees, and Quality Assurance Evaluators (QAEs).

A3.2.1.2. Provides fuels operation training in quality surveillance, war planning, expeditionary fuel systems, and logistics management areas.

A3.2.2. **MAJCOM/LGRF.**

A3.2.2.1. Select PLMC attendees.

A3.2.2.2. Maintain waiver authority for Technical Sergeants filling the fuels superintendent position or other Staff positions.

A3.3. Fuels Management Professional Enhancement Program (PEP). The Office of the Secretary of Defense Deputy Under Secretary of Defense for Logistics (DUSD(L)) provides a hands-on managerial development program in fuels management for mid-level logistics readiness officers (Senior Captains through Lieutenant Colonel).

A3.3.1. HQ AFPC/DPASL advertises the PEP program and forwards names to HQ USAF/ILGM.

A3.3.2. HQ USAF/ILGM provides nominees to DUSD(L) for final selection.

A3.3.3. Assignment will rotate with DUSD(L), JCS/J4, and HQ USAF/ILGM.

A3.4. Utilization and Training Workshop (U&TW). HQ USAF/ILGM chairs the annual U&TW IAW AFMAN 36-2245, *Managing Career Field Education and Training*. U&TW attendees include, the Fuels Training Planning Team (FTPT) consisting of a fuels representative from every MAJCOM, AFLMA, AFPET, and the Fuels Career Field Manager.

A3.4.1. Determines training requirements and AF Specialty responsibilities.

A3.4.2. Ensures training quality and curriculum currency.

A3.4.3. Reviews all course control documents and associated curriculum materiel.

A3.4.4. Provides technical expertise to update course materiel.

A3.4.5. Identifies and plans for training equipment.

A3.4.6. MAJCOMs are OPR for the specific courses. HQ USAF/ILGM will ask (as required) MAJCOMs to audit specific AETC courses to ensure curriculum is accurate and applicable to current operations.

Attachment 4

FUELS MANAGEMENT STRUCTURE

Table A4.1. Fuels Management Structure.

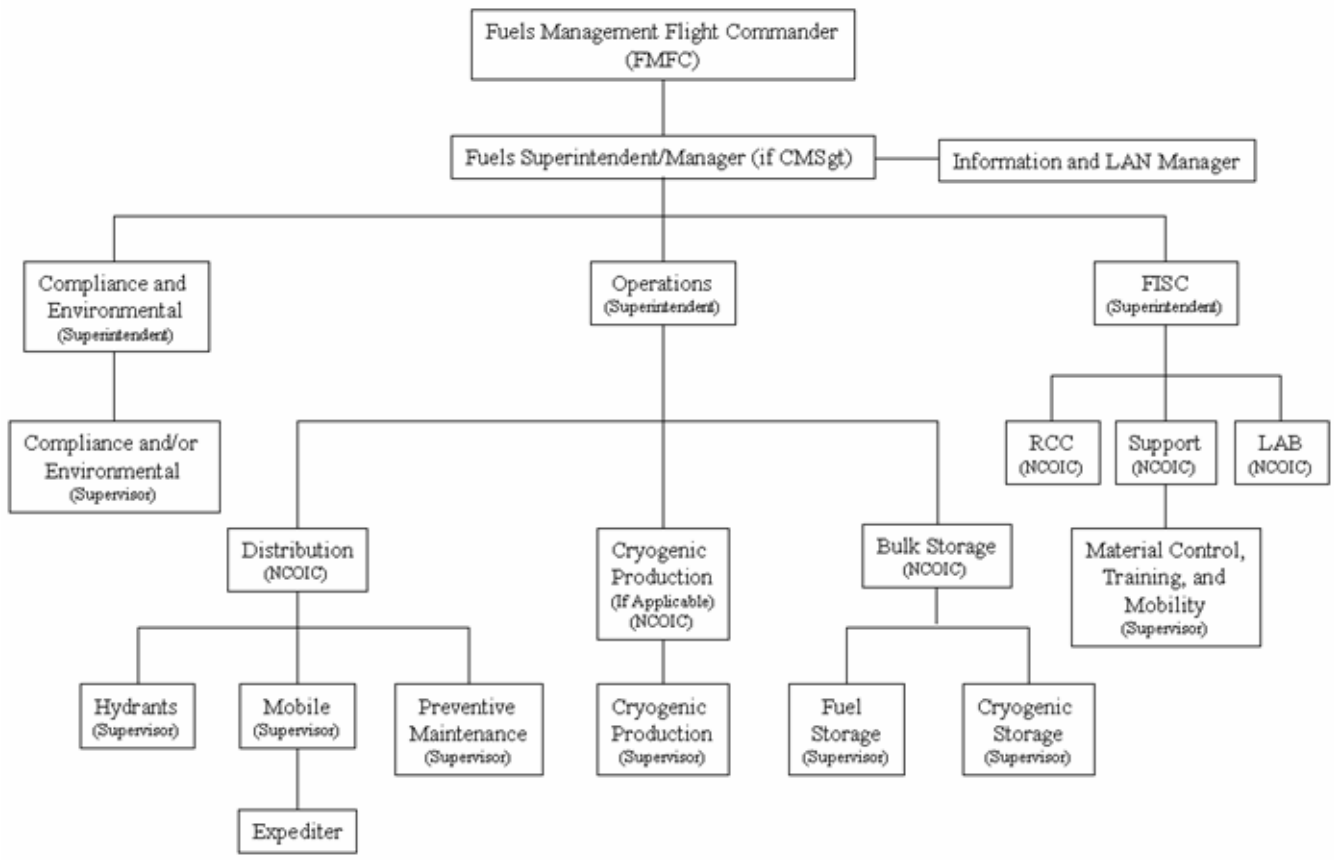
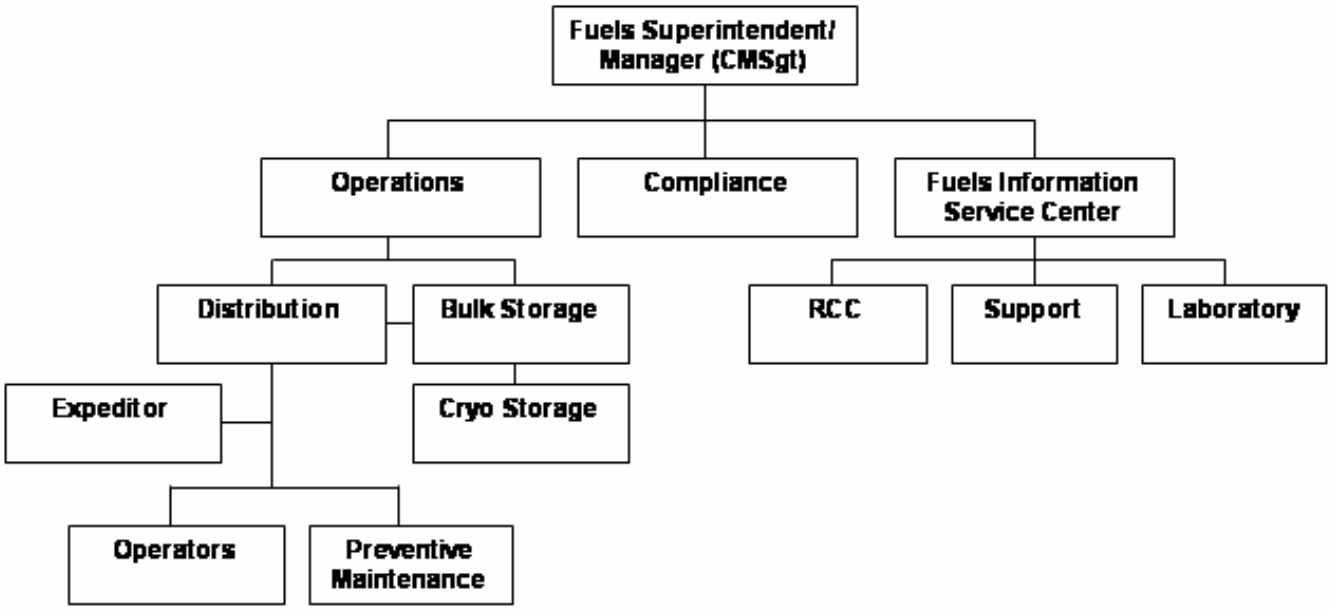


Table A4.2. Standard Fuels Flight Office Symbols.

LGRF	Fuels Management
LGRFC	Fuels Compliance and Environmental
LGRFP	Cryogenic Production
LGRFI	Fuels Information Service Center
LGRFIR	Resource Control Center
LGRFIL	Fuels Laboratory
LGRFIT	Fuels Support
LGRFO	Fuels Operations
LGRFOD	Fuels Distribution
LGRFOS	Fuels Storage

NOTE: MAJCOMs have the approved option to align Hydrants under Storage IAW para **1.1.1.** of this instruction.

Table A4.3. (Added-ANG) ANG Fuels Management Structure.



Attachment 5

CRYOGENIC EQUIPMENT AND FACILITY REQUIREMENTS

A5.1. Equipment.

A5.1.1. **Purge Unit.** The GSU-62/M Air Purging Unit is a portable electric motor-driven blower and heater unit used to purge storage containers with heated air. Record purge unit inspections, maintenance, and conditions on AFTO Form 244, **Industrial/Support Equipment Record**. One purge unit per FP account storing cryogenics is authorized.

A5.1.2. **Vacuum Gauge.** The vacuum gauge is a hand-held battery powered unit. Use this unit to monitor, in microns, the vacuum reading of the annular space of a cryotainer. Use the gauge in conjunction with a thermocoupler for an accurate reading.

A5.1.3. **Vacuum Pump.** The PMU-4/E Vacuum Pump is a portable, explosion-proof electric-driven, oil free-air pumping unit which draws and maintains the insulating vacuum in storage containers. Record vacuum pump inspection, maintenance, and conditions on AFTO Form 244. One vacuum pump per FP account is authorized.

A5.1.4. **Cryogenics Samplers.** Sample cylinders are portable containers used to draw and transport cryogenics product samples. Samplers do not require periodic maintenance record documentation, but they must be hydrostatically tested every five years. Guidance for requisitioning replacement cylinders is outlined in T.O. 33D2-10-60-1, *Operation and Maintenance Instruction with Individual Parts Breakdown – Cryogenic Sampler Model FCS 2001*.

A5.1.5. **Portable Dual Efficiency Meter.** The Portable Efficiency Meter checks the storage container vacuum by measuring the product boil-off rate.

A5.2. Facility Requirements. The FMT provides the following to ensure a safe, functional, and secure facility:

A5.2.1. Protective fencing to enclose storage and generation facilities. Designate cryogenics facilities as controlled areas according to AFI 31-101, *The Air Force Installation Security Program*.

A5.2.2. Adequate electrical power for production operation and auxiliary equipment. Adequate indoor and outdoor lighting to include receiving and servicing areas. Electrical power should be 3 phase, 220 volts, 50/60 cycle.

A5.2.3. A concrete foundation with non-petroleum based sealant between joints for storage tanks, receiving, and servicing area and servicing cart parking areas. Completely fill the joints with the sealer to prevent the accumulation of dirt.

A5.2.4. A paved road to and from the facility, capable of supporting commercial cryogenics delivery vehicles and maintenance vehicles, as well as a drive-through capability to permit receipt and issue without requiring the vehicle to backup.

A5.2.5. A telephone with a bell capable of being heard above the noise of the operating production, and within the tank storage area. Intrinsically safe radios may be used in lieu of telephone at cryogenic facilities that are low use and small in nature.

A5.2.6. Adequate grounding points for storage tanks and servicing units. Permanently ground fixed production plants.

A5.2.7. Provide blowdown/condensate traps for each generating plant to comply with the base ecology program and environmental protection agency requirements.

A5.2.8. In cold weather climates/heavy snowfall areas cryogenic storage facilities will be enclosed with roll-up style doors. Note: In operations involving nitrogen ensure the doors remain open during servicing.

A5.2.9. In cold climate locations ensure snow is removed.

A5.2.10. Do not document general cryogenic system area inspection items such as fencing, drip pans, lighting, safety equipment etc., on the AFTO Form 244. Each FMT prepares a locally developed inspection checklist applicable to their LOX/LIN facilities.

Attachment 6

COLOR CODES FOR CRYOGENICS PLANTS

Table A6.1. Color Codes For Cryogenics Plants.

Item	Color	Secondary Warning Color
PLANTS:		
Liquid oxygen discharge port	Green #14260	
Liquid nitrogen discharge port	Brown #20219	
Safety valve	Do not paint	
FACILITIES:		
Electric conduit	Gray #16187	Red
Electrical control center interior doors	Orange #12197	
Electrical control center and remote switch boxes	Gray #16187	Red
Caution areas and safety shields	Yellow and black (Cross hatched)	
Floor *	Do not paint	
Building interior	Light color	
* Seal floors in the production area with epoxy sealant. Do not paint liquid oxygen storage and cylinder charging floors.		

NOTES:

1. Mark all gauges (pressure, liquid level, and flow) in the following manner:
   a. Green - normal operating range.
   b. Yellow - caution range.
   c. Red - danger/over pressure range.
2. Paint the building interior a light color to provide a bright working area.

Attachment 7

FUELS SPECIAL EXPERIENCE IDENTIFIER (SEI) MATRIX

Table A7.1. Fuels Special Experience Identifier (SEI) Matrix.

SEI	035	036	037	039	040	369	387
Course	FARP	CRYO Maintenance J3AZR 2F051-005	CRYO Production J3AZR 2F051-006	LAB J3AZR 2F051-001	ACCT DESC FAS Basic Course and DESC Inventory Acct. Course	ABFDS ACC ABFDS -001	ATHRS ACC ATHRS -000
PDS		DDG	DCG	BYP	N/A	QXB	VP3
AFSC	2F051	2F0X1	2F051	2F051	2F051	2F051/71	2F051/71
Experience	6 months	3 months	3 months	6 months	6 months	N/A	N/A
Clearance	SECRET	SECRET	SECRET	SECRET	SECRET	SECRET	SECRET
FMT Recommends	X	X	X	X	X	X	X
Commander Approves	X	X	X	X	X	X	X

NOTES:

1. Refresher training is required when personnel fill UTCs requiring the SEI. t. Refresher training is given at the time intervals mentioned below. The specific refresher training required is determined by the FMT unless specified by other training methods as they become available.
2. SEI 035 - Every year from initial training or last mission flight (Phase1).
3. SEI 037 - Every two years from initial training or last assignment in a cryogenic production plant.
4. SEI 039 - Every year from initial training or last assignment in a fuels laboratory.
5. SEI 040 - Every year from initial training or last assignment reconciling a fuels account in FAS.
6. SEI 369 - Every two years from initial training or last mission flight
7. SEI 387 - Every two years from initial training or last field application

Attachment 8

PERSONAL EQUIPMENT FOR FARP AND ABFDS SPECIALISTS

Table A8.1. Personal Equipment For FARP And ABFDS Specialists.

Equipment	U/I	FARP	ABFDS
Flight Suit	ea	4	2
Flying Gloves	pr	3	2
Flight Jacket (summer)	ea	1	N/A
Flight Jacket (winter)	ea	1	1
A-3 Bag or equivalent	ea	1	N/A
Boots, Flyers, all leather	pr	2	1
Patches			
MAJCOM	ea	N/A	3
Unit	ea	6	3
AFSOC	ea	6	N/A
American Flag	ea	6	3
Rain suit	ea	1	1
Flyers Thermal Top	ea	2	2
Flyers Thermal Bottom	ea	2	2
Shorts, BDU, Black	pr	2	N/A
* Helmet (HGU-26P or 55P)	ea	1	1
* Oxygen Mask	ea	1	1
* CRU-60 Adapter	ea	1	1
* Helmet Bag	ea	1	1
Prescription Glasses	pr	2	2
Sunglasses	pr	1	1
Dust goggles	pr	1	1
* Web Belt w/Suspenders	ea	1	1
* Canteen w/cover and cup	ea	1	1
* Flak Vest	ea	1	1
* Sleeping Bag	ea	1	N/A
* Sleeping Bag Pad	ea	1	N/A
Poncho Liner, Camouflaged	ea	1	N/A

Equipment	U/I	FARP	ABFDS	
* Butt Pack	ea	1	N/A	
* First Aid Kit Individual	ea	1	N/A	
* Survival Knife (M-9)	ea	1	N/A	
* Multiplier Tool	ea	1	1	
* Mini Mag or equiv.	ea	1	1	
* Mini Mag Light Holder	ea	1	1	
* Waterproof clothing bag	ea	2	1	
* Snaplink	ea	2	N/A	
* Backpack, Large (two piece)	ea		1	N/A
* Knee Pads	pr		1	N/A
* Last Resort Belt	ea		1	N/A
* Wrist Watch	ea		1	1
*Holster, 9MM	ea		1	1
* Pager (national)	ea		1	N/A
Tourist Passport	ea		1	1

NOTES:

1. Items marked with an asterisk (*) are required to be turned in upon PCS movement or termination of specialty requirements. Exception: Helmet liners may be retained by the individual.
2. ABFDS personnel do not require equipment issue to attend the formal training course. Equipment will only be issued to those filling an ABFDS mobility/UTC position.
3. The life support section provides an inspection location for required helmets and masks. ABFDS operators sign out the required helmet and mask from the life support section as needed. ABFDS operators return the helmet and mask to the life support section on completion of mission requirements.

Attachment 9

CLIPBOARD COLOR CODE SCHEME

PRODUCT	COLOR	STRIPES
JP4	Yellow	
JP5	Yellow	Black Checks
JP7	Yellow	Red
JP8	Yellow	Blue
JP8 + 100	Yellow	Green
JPTS	Yellow	Black
Diesel, Low Sulfur	Brown	
Diesel, High Sulfur (Includes JP8 when used as Diesel)	Brown	Blue
Diesel, Biodiesel	Brown	Green
Automotive Gasoline		
Leaded	Red	
Unleaded	Red	Green
E85 (Ethanol)	Red	Blue
UDMH	Red	Yellow
(Unsymmetrical Dimethylhydrazine)		
Nitrogen Tetroxide	Brown	White
Liquid Oxygen	Green	Yellow
Liquid Nitrogen	Gray	Yellow
Waste Fuel	Red w/ yellow outer border	Black

Attachment 10

MANAGEMENT ENGINEERING PROGRAM

A10.1. Key Management Engineering Program (MEP) Organizations.

A10.1.1. The MEP provides analytical assistance for functional (fuels) Superintendents to improve productivity and determine standardized manpower requirements. HQ USAF/DXPM is the office of primary responsibility for the Air force Management Engineering Program.

A10.1.2. The Air Force Manpower and Innovation Agency (AFMIA) and MAJCOM Directors of Manpower and Organization administer the MEP through a dual concept of operation.

A10.1.2.1. AFMIA provides analytical services to Air Force functional managers for core processes that are common to each command.

A10.1.2.2. MAJCOMs, through the MAJCOM XPM offices and base-level Manpower and Organization Office (MO), provides analytical services to functional managers within respective MAJCOMs.

A10.2. Location of Manpower Agencies.

A10.2.1. HQ USAF/DP, as part of the Air Staff, is located in the Pentagon.

A10.2.1.1. AFMIA is a Field Operating Agency (FOA), headquartered at Randolph, AFB TX.

A10.2.1.2. MAJCOM XPM is located at headquarters locations for each command.

A10.2.1.3. MO is located on a host or main operating base.

A10.3. MEP Duties Assigned to Air Force Manpower and Innovation Agency (AFMIA).

A10.3.1. Provides analytical services (Process Improvement Program, Continuous Process Improvement through Enterprise Reengineering), Benchmarking, Costing, Facilitation, Integrated Resource Management, Organization, Performance Measures, and Standards and Variances that apply to more than one MAJCOM or for organizations with no management engineering capability.

A10.3.2. Provides technical guidance and support to functional OPRs, MAJCOMs, FOAs, and DRUs.

A10.3.3. Publishes all manpower standards.

A10.3.4. Serves as point of contact for all Air Force management engineering procedural matters.

A10.3.5. Develops and implements training on the latest MEP technologies. Implements the MEP as directed by Air Staff.

A10.4. Duties of the Installation Manpower and Organization Office (MO). The Manpower and Organization Office manages manpower for Commercial Activities (CA) which includes fuels management, aircraft maintenance, civil engineering, etc. The local MO:

A10.4.1. Provides analytical services (Continuous Process Improvement, Benchmarking, Costing, Facilitation, Integrated Resource Management, Organization, Performance Measures, and Standards and Variances that apply to wing functions (fuels).

A10.4.2. Advises wing commanders and functional (fuels) managers on effective resource management.

A10.4.3. Provides management engineering services in support of inputs to MAJCOM and Air Force process management studies.

A10.4.4. Assists base functional managers with Fast Payback Capital Investment Program (FASCAP), Productivity Investment Fund (PIF) proposals, and Component Sponsored Investment Program (CSIP).

A10.4.5. Validates workload exceptions submitted by commanders and functional managers.

A10.4.6. Assists commanders and functional managers in the development of performance work statements (PWS).

A10.5. Variances to Manpower Standards. To increase the applicability of manpower standards and still be responsive to unique requirements at each location, the MEP recognizes work variations due to mission, technology, or environment. These variations are identified as either plus or minus variances to the basic standard. The fuels community identifies the requirements for exceptions to the local Manpower and Organization Office. HQ USAF/ILGM recommends final approval or disapproval for fuels manpower determinant.

Attachment 11

FUEL SPILL REPORT FORMAT

FROM: YOUR UNIT IDENTIFIER

TO: HQ MAJCOM /Fuels Office

INFO: AFPET/HQ AF/ILGM

SUBJECT: Fuel Spill Notification

1. UNIT NAME/DESIGNATION:

2. FLIGHT POC NAME/DSN/EMAIL:

3. DATE/TIME OF SPILL:

4. LOCATION OF SPILL:

5. CLASS OF SPILL/ESTIMATED GALLONS:

6. CAUSE OF SPILL:

7. AGENCIES NOTIFIED:

8. STATUS OF CONTAINMENT/CLEAN-UP:

9. GALLONS RECOVERED:

10. ENVIRONMENTAL IMPACT:

11. REPORT COORDINATION:

NOTE: AFPET will formally advise DESC/Air Staff of fuel related mishap with corrective action being taken, precautions to prevent future occurrence and trend analysis. This will allow follow-up actions by AFPET as well as lessons learned to the field.

Attachment 12

AGENDA ITEM FORMAT FOR THE FUELS MANAGEMENT STEERING GROUP, FUELS STRATEGIC PLANNING COUNCIL AND THE UTILIZATION & TRAINING WORKSHOP

RANK/NAME OF SUBMITTER:	**MAJCOM:**
TITLE/SUBJECT:	
BRIEF STATEMENT OF CONCERN:	
RECOMMENDED ACTION:	

Attachment 13

AIR FORCE POL TECHNICAL ASSISTANCE TEAM

A13.1. Air Force POL Technical Assistance Team. The Air Force POL Technical Assistance Team is assigned to the Technical Division of AFPET (Det 3 WR-ALC), which is the service control point for Air Force fuel quality issues. The Tech Team has worldwide responsibility to identify, investigate, and correct problems involving aviation fuel contamination, fuel electrostatic hazards, environmental controls, conservation and reclamation of petroleum products and oils, and fuel system deficiencies.

A13.2. Responsibilities

A13.2.1. Air Force fuels activities will coordinate with the AF POL Technical Assistance Team on actions involving aviation fuel contamination, electrostatic hazards, conservation and reclamation, or environmental matters.

A13.2.2. Copies of pertinent reports, correspondence, studies, and data relating to prevention and correction of fuel contamination problems will be routed to the team as information or action items.

A13.2.3. Members of the team will maintain an up-to-date International Certificate of Vaccination and a valid passport for use in meeting requests for assistance from overseas commands.

A13.3. Request for Assistance:

A13.3.1. The AF POL Technical Assistance Team will respond immediately to requests for assistance from MAJCOMs and will be on-site for technical evaluation within three working days, or sooner, as required by the situation.

A13.3.2. A reply to the request for assistance will be prepared for the Technical Division Chief's signature and will contain: (1) Estimated team arrival date and duration of the visit; (2) Name, rank or grade, title, SSAN, and security clearance of each participating team member; and (3) Support required by the team (transportation, billeting reservations, system briefings and availability of system as-built drawings).

A13.4. On-Site Evaluation. The AF POL Technical Assistance Team has two basic objectives during each investigation.

A13.4.1. The first is the correction of suspected problems.

A13.4.2. The secondary objective will be a technical evaluation of base fuels facilities that will encompass the scope of quality and reliability assurance.

A13.4.3. Where feasible, problem-solving visits will also include an overall evaluation of the performance of distribution systems, operating techniques, and facilities.

A13.5. Reports of Visit:

A13.5.1. The AF POL Technical Assistance Team will issue a written report of each visit not later than 30 days after completion of the investigation.

A13.5.2. The report will be forwarded to the applicable MAJCOM and action agencies by cover letter prepared for the Technical Division Chief's signature.

A13.5.3. Recommendations made by the team requiring immediate attention will be forwarded to the action agency by letter, message, or email as soon as possible.

A13.6. Report Evaluation. The Air Force POL Technical Assistance Team will:

A13.6.1. Maintain a case file for each visit made and subjective files for each category of problem encountered.

A13.6.2. Make a cumulative evaluation of the materiel contained in the files.

A13.6.3. Identify potential problem areas to MAJCOM/base-level activities.

A13.6.4. Identify areas where studies should be initiated to prevent or correct problems.

A13.6.5. Submit recommendations to appropriate action agencies that are responsible for changes to published criteria.

Attachment 14

STANDARD FUELS PERSONNEL UNIT TYPE CODES

Table A14.1. Fuels Personnel Unit Type Codes.

AFSC	SEI	JFABA	JFABB	JFABF	JFASA	JFAFT	JFA7S	JFA7M	JFA9M	JFACF	JFACM	JFARC	JFARP
2F031		1	2										
2F051		2	1-E-5									2-E-5	
2F051	035												3
2F051	036										1		
2F051	039				1								
2F051	040				1								
2F051	369			2									
2F051	387		2			2							
2F071							1	1-E-7					
2F071	039												
2F071	387					1-E-6							
2F091									1				
021R3	KY									1			
TOTAL		***3***	***5***	***2***	**2**	***3***	***1***	***1***	***1***	***1***	***1***	***2***	***3***

NOTE: The 387 SEI can be substituted with field experience for UTC JFABB provided it is annotated in the CFETP.

Attachment 15

FUELS CHARTERED WORKING GROUPS

Table A15.1. Fuels Working Groups.

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Fuels Management Steering Group (FMSG) Frequency: Annually the fourth week in February prior to the Spring AFMMB	AF/ILGM AFPET	AFPET	AF/ILGM AFPET MAJCOM Fuels Officer MAJCOM Fuels Manager	AFCESA/CESM AFRL/PRSF AFPC 2F0X1 Func Rep Fuels Officer Course Rep Fuels Training School Rep WR-ALC/LE JCS/J4 AFLMA LRO Functional Rep	Prepare issues for the AFMMB Establish Fuels Enlisted Force Policy Establish Fuels Officer Force Policy Establish Fuel Quality Policy Establish Fuels Infrastructure Policy Establish Fuels Strategic Roadmap Establish Fuels IT Policy Establish Fuels Vehicle Policy Establish Fuels Support Equipment Policy Establish Fuels Policy & Procedural (regulatory) requirements Establish Fuels Safety Policy Establish Fuels Management Performance Goals

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Air Force Installation Planning Review Board (AF-IPRB) Frequency: Annually, 30-days prior to DESC IPRB (Approx Oct-Nov)	AF/ILGM	AFPET	AF/ILGM AFPET AFCESA/CESM MAJCOM Fuels Rep MAJCOM Fuels Engineer	DESC-F	Air Force MILCON Review & Validation Prepare AF input to DESC IPRB MR&E Review
Air Force Fuels & Engineering Work Group (AF-FEWG) Frequency: Annually, in conjunction with the AFIPRB (Approx Oct-Nov)	AF/ILGM	AFPET	AF/ILGM AFPET AFCESA/CESM MAJCOM Fuels Rep MAJCOM Fuels Engineer		Prepare issues for the FMSG Implement Fuels Infrastructure Policy Review technological developments for AF Fuels application Develop Fuels Quality Policy Develop AF input to DOD Fuels Facility Engineering Panel (FFEP)

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Fuels Strategic Planning Council (FSPC) (Formerly the Fuels Career Field Enhancement Conference) Frequency: Annually, the week prior to the Supply/Fuels Readiness Competition	AF/ILGM	AFPET	AF/ILGM AFPET 2F000 CEM and CMSgt-selectees MAJCOM Enlisted Fuels Rep when CEM not assigned LEAP personnel MAJCOM 2F0X1 IG Personnel AFLMA Fuels Analysis Enlisted Rep Enlisted Joint Positions	AFPC 2F0X1 Func Rep Fuels Training School Rep AFPET Team Members	Prepare issues for the FMSG Develop Fuels Enlisted Force Policy Recommends Fuels Enlisted Requirements Recommends Fuels Safety Policy Recommends Fuels Quality Policy Recommends Fuels PPE Requirements Establish Fuels Career Field Training Requirements Establish Fuels PPE & Safety Training Requirements Establish Fuels Deployment Training Requirements

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Fuels Information Technology Workgroup (FITW) (FAS Panel) (PETROL RAM Panel) (FISC Panel) <u>Frequency:</u> Each panel annually or more frequently as necessary to resolve current issues	AF/ILGM	AFPET	AF/ILGM AFPET MAJCOM Fuels Rep	Fuels Officer Course Rep Fuels Training School Rep WR-ALC/LE DESC AFLMA	Prepare issues for the FMSG Develop FAS/FES Interface Procedures Establish PETROL RAM requirements Implement PETROL RAM Policy Establish Fuels Accounting requirements Implement FISC Policy & Procedure Develop Fuels Deployment IT requirements Review technological developments for AF Fuels application

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Fuels Support Equipment Workgroup (FSEWG) (Fuels Vehicle Panel) (Fuels Support Equipment Panel) (Cryogenics Support Panel) Frequency: Each panel annually or more frequently as necessary to resolve current issues	AF/ILGM AFPET	AFPET	AF/ILGM AFPET MAJCOM Fuels Rep	WR-ALC/ LES/LEE AF/ILPR AF/ILXX Fuels Training School Rep AFLMA	Prepare issues for the FMSG Review & Develop Allowance Standards Vehicle & Equipment Configuration Mgmt & Review Commercial Item Description Review & Recommendations Develop & Review Military Performance Specifications Develop Depot Maintenance Requirements Develop AF position for JIPWG issues Implement Vehicle & Equipment Safety Policy Implement Vehicle & Equipment Quality Policy Review COTS potential for AF use Review Technological Developments for AF Fuels application

Chartered Group and Periodic Requirement	Chair	Host	Core Members	Advisors	Charter Topics
Fuels Utilization &Training Workshop (U&TW) ***NOTE:*** a separate U&TW is conducted for Officer and Enlisted Frequency: Triennially the 4th week in January being in 06	AF/ILGM	AETC	AF/ILGM AFPET MAJCOM Fuels Rep Fuels Officer Course Rep Fuels Training School Rep	AFPC 2F0X1 Func Rep AETC Training Manager	Develop & Implement Fuels Training Requirements Develop & Implement Fuels Training Materiel Develop & Implement Fuels Safety & PPE Training Materiel Develop & Implement Fuels Deployment Training Materiel
Air Force Alternative Fuels Working Group (AFAFWG) Frequency: Annually the 2nd week of April	AFPET/ AFT	AFPET/ AFTH	AF/ILGM AFPET MAJCOM Fuels Reps		Establish Alternative Fuels Policy & Procedural (Regulatory) Requirements Develop Fuel Quality Requirements Establish Infrastructure Requirements Evaluate Operational Problems